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ABSTRACT

This study developed (1) exemplary behavioral objectives and performance indicators for the business component of a school district and (2) a model to aid practitioners in stating the behavioral objectives and performance indicators of a school district's business function. A jury, whose members had a working knowledge of PPBS, school business services, and behavioral objectives, validated a total of 42 objectives states in behavioral terms, together with appropriate performance indicators. Divided into (1) business services, (2) buildings and grounds, (3) financial services, (4) transportation, and (5) food services, these objectives represent the desired conditions of the business services function of a school district. (RA)

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The Development of A Model Exemplifying Business Services Objectives and Their Performance Indicators in Educational Program Budgeting

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SUMMARY

Purpose of the Study

The primary purpose of this study was to develop exemplary objectives and performance indicators for the business component of a school district for use in educational program budgeting. The secondary purpose of the study was to develop a model to aid practitioners in stating the objectives and performance indicators for the business component of a school district.

Research Methods

The study utilized a jury of experts to validate objective and performance indicator statements indicative of the desired conditions of the business services of a school district. The study drew upon the systems model developed by Brissey related to the decision-making process. This model, combined with the extensive PPBS work of Eidell and Nagel of the Center for the Advanced Study of Educational Administration, served as the background for the study.

The study utilized a jury comprised of individuals suggested by four recognized PPB experts: Dr. Frank Banghart of Florida State University, Dr. Harry Hartley of New York University, Dr. William Curtis of the Association of School Business Officials, and Dr. David Novick of the RAND Corporation. A list of twenty-two potential jurors was developed from the suggestions of the above experts. The jurors were suggested based upon the following criteria:

1. Each nominee was to have a working knowledge of PPBS or some similar approach to the rational allocation of scarce resources.

2. Each nominee was to have prior knowledge of the workings of the business services within a school district.

3. Each nominee was to be familiar with objectives stated in behavioral terms and techniques employed in measuring the accomplishment of behavioral objectives.

The tentative objective and performance indicator statements were generated from a review of the literature dealing with (1) planning-programming-budgeting systems, (2) behavioral objectives, and (3) the business component of a school district. The objectives and performance indicators developed were grouped under five organizational headings: (1) the business services division, (2) the buildings and grounds department, (3) the financial affairs department, (4) the transportation department, and (5) the food services department. Initial objectives were developed and revised based upon suggestions from persons assigned to the Bureau of Educational Research, University of Denver, and a pilot jury of practitioners. Fifty objectives and eighty-one associated performance indicators were presented to the jury for validation.

Jurors were encouraged to make comments concerning the objectives and performance indicators. They were also provided the opportunity to suggest a more appropriate level of performance than the level stated in the indicator. Modifications to the objective and performance indicator statements were made based upon the juror suggestions and comments.

Results

Fifty tentative objective statements were developed and presented to the jury. Of those fifty objectives, forty-five were validated.

A total of eighty-one indicators were developed in association with the fifty objectives. Eight indicators were related to the non-validated objectives. Of the remaining seventy-three indicators, sixty-two were validated.

Conclusions

The objectives that were validated along with their validated performance indicators were concluded to be exemplary of the tasks normally associated with the business division of public schools. The validated objective and performance indicator statements were also concluded to be representative of a model designed to allow the business component to initiate the collection of data descriptive of the actual state of the system. Comparison of the data on the actual state of the system with the desired state will set the stage for the detection of discrepancies and resultant long-range plans.

Recommendations

Recommendations generated as a result of the study were as follows:

1. School districts should enter into some form of a PPB system. In so doing, districts are encouraged to view the business services component as a separate programmatical effort.

2. School districts should use the exemplary objectives and indicators herein presented fully intending to modify the levels of performance in accordance with district policies and historical data.

3. School districts should utilize the exemplary objectives and indicators as a basis for establishing an open dialogue for the promotion of congruent opinion regarding objectives and respective responsibilities of individuals.

4. School districts who are contemplating writing behavioral objectives for the business area utilize the general format developed in this study.

5. A similar study should be undertaken to identify the composition, for the administrative component of a school district.

6. An additional study should be made in which the validated objectives and performance indicators from this study would be placed in some sort of a priority list for the analysis of alternatives stage.

INTRODUCTION

During the 1960's public education has been hampered by insufficient funds to meet those objectives demanded of it by the society it serves. Actions of the public in response to school requests for more revenue have been unfavorable. In order to turn the tide of public opinion to a more favorable position, school administrators have sought new approaches to the entire decision-making process. In 1969 the American Association of School Administrators' Commission on Administrative Technology submitted a report that was the product of four years of study. The purpose of that report was "to identify recent developments in administrative technology in other fields, determine the feasibility of adapting what has been successful elsewhere to school administration, and facilitate dissemination of concepts of the new administrative technology that are pertinent to the profession."[1] The conclusions drawn by the commission included the following:

> Whatever the type of technology and whatever the area to which it is applied, certain demands are placed upon the would-be-user. Where it is to be used to enhance organizational decision-making, the technology may require the administrator to produce a more precise definition or clarification of objectives in operational terms . . . .[2]

PPBS, one of the most significant new approaches to planning, has required the decision-maker to (1) define goals and objectives and set priorities in view of available data or information . . . , and (2) group organizational processes into sets of activities or programs which can be defined in terms of the goals and objectives stated and the priorities set . . . .[3] In this framework PPBS was thought of as a rational, systematic, out-put oriented, and data-based tool for educational planning. Eidell indicated that the planning process was a product of the detection of discrepancies between the actual and desired states of a system.[4]

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[1] Stephen J. Knezevich (ed.), Administrative Technology and the School Executive, a report submitted by the AASA Commission on Administrative Technology (Washington: The Association, 1969), p. 7.

[2] Knezevich, Administrative Technology . . . , p. 22.

[3] Terry L. Eidell and John M. Nagle, PPBS and Data-Based Educational Planning (Eugene, University of Oregon: Center for the Advanced Study of Educational Administration, 1970), p. 3.

[4] Eidell, p. 24.

Eidell used the heuristic systems model developed by Brissey and others[5] as the framework for gathering data for the planning process. The model, depicted in Figure 1, indicated the need for the collection of data of both the actual and desired states of a system. The process of determining the desired state of a system was described as follows:

> District personnel identify and refine the complete set of educational philosophies, goals, and objectives which either do now or should in the future guide all activities and/or programs in the district . . . . Moreoever, this set is expected to be disaggregated to the level of objectives which are capable of measurement and stated behaviorally and which, therefore, indicate explicitly the desired out-puts of the school district.[6]

It was indicated by Alkin and Bruno that the chief impediment to the application of PPBS to education was the lack of progress toward precisely stated objectives of the educational system.[7]

It therefore seemed appropriate that a study should be conducted in which precisely stated objectives would be developed. It also seemed appropriate that the objectives developed should be compatible with the PPBS format and philosophy.

Through a preliminary search of the literature and discussions with educators, it was ascertained that extensive work had been accomplished in the area of instructional objectives. These objectives were compatible with the PPBS philosophy. Furthermore, it was determined through the discussions that no objectives had been developed for the business component of a school district that were usable in the PPBS format. This seemed illogical in that many times the business division was given the responsibility of implementing and supervising the PPB systems. Further discussions with local school district personnel involved in the business area indicated a need for the development of such objectives. At a presentation related to PPBS, a representative of the accounting firm of Peat, Marwick, Mitchell and Company stated that the development of precise objectives for the business area would be

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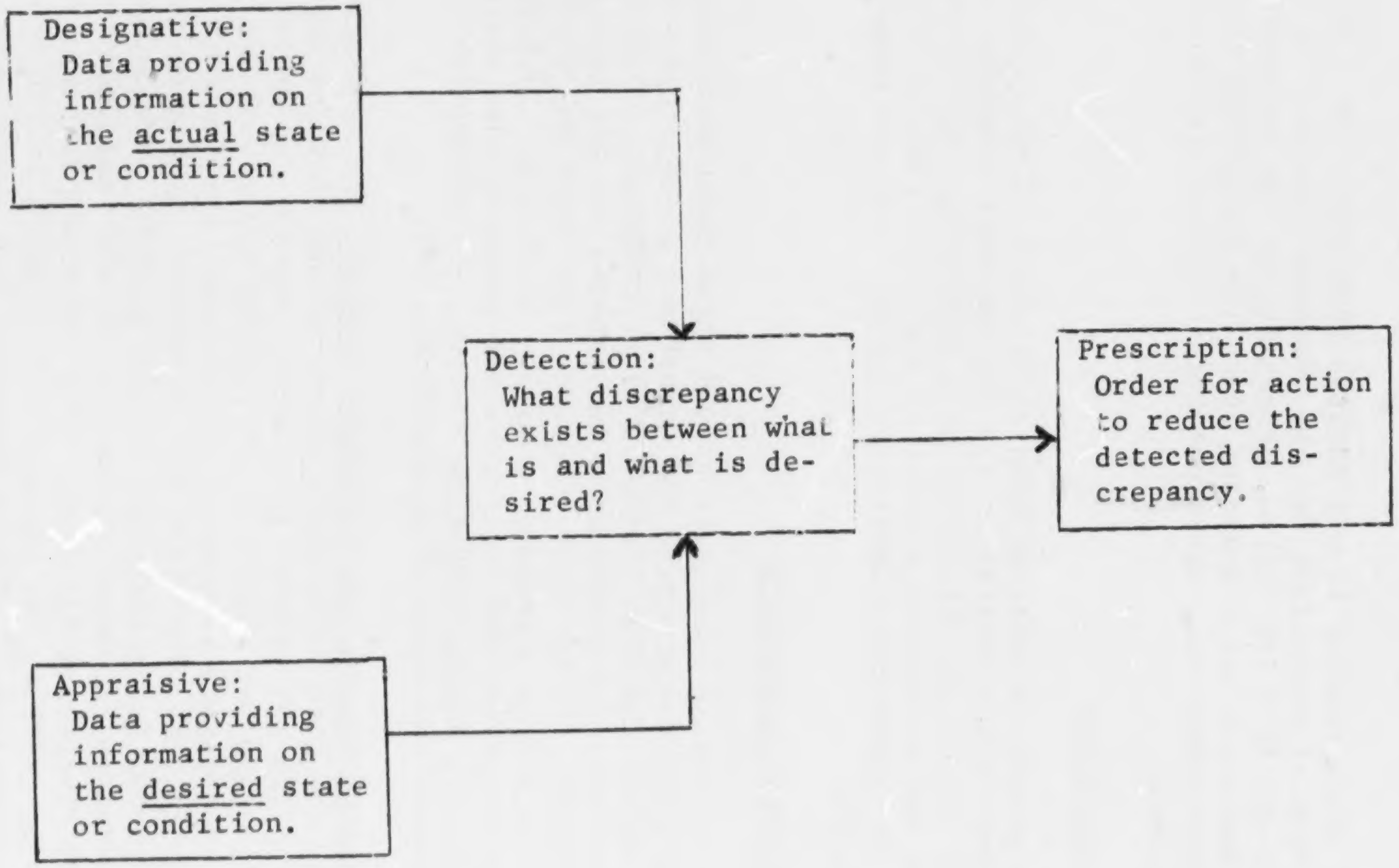
[5] F. L. Brissey, F. R. Fosmire, and R. J. Hill, Technology Report: Problems, Problem-Solving and Human Communication, A Laboratory Approach (Center for the Advanced Study of Educational Administration, 1969), pp. 10-18.

[6] Eidell, p. 37.

[7] Marvin C. Alkin and James E. Bruno, "Systems Approaches to Educational Planning," Social and Technological Change: Implications for Education (Eugene: University of Oregon Press, 1970), p. 213.

Figure 1

A Systems Model for Decision-Making*


Designative:
Data providing information on the actual state or condition.
Appraisive:
Data providing information on the desired state or condition.
Detection:
What discrepancy exists between what is and what is desired?
Prescription:
Order for action to reduce the detected discrepancy.

*Brissey, p. 11

much more difficult than the instructional area. The rationale for this was that no business objectives appropriate for modification were available.

For these reasons it was decided that the study would focus upon the development of objectives for the business component of a school district for use in a PPB system. Moreover, it was decided that the objectives developed would indicate generally acceptable techniques of criterion measurement and, where possible, appropriate expected levels of system attainment.

Purpose of the Study

The primary purpose of this study was to develop exemplary objectives and performance indicators for the business component of a school district for use in educational program budgeting. The secondary purpose of the study was to develop a model to aid practitioners in stating the objectives and performance indicators for the business component of a school district.

Review of Related Literature

The review of literature served three major purposes: (1) to identify the relative position and importance of objectives and performance indicators within the PPBS concept, (2) to establish a framework for stating the objectives and performance indicators, and (3) to establish a background within the business component from which the objective and performance indicator statements would be generated. In keeping with the above stated purposes, the literature was gathered into three topic areas: (1) planning-programming-budgeting systems, (2) behavioral objectives, and (3) the business component of a school district.

Planning-programming-budgeting systems. The development of PPB systems over the last fifty years can be traced to three separate sources: (1) business, (2) the federal government, and (3) the evolution of budget reform.[8] Although the source of the present conceptualization of PPBS was rooted in separate sectors of the economy, the impetus for development was consistent. The drive for an adequate system to relate the budget to program accomplishments in output terms lurked behind each sequential advance in budget structure. Schick explained this movement by stating that "budgeting has always been conceived as a process for systematically relating the expenditures of funds to the accomplishment of planned objectives."[9] Schick explained that every budgetary system comprises the processes of strategic planning, management control, and operational control. The characterization of a budgetary system can be described as the emphasis or orientation toward one process at the expense of the others. Chambers echoed Schick's explanation observing that the first stage of budget development emphasized central control over spending and objects of expenditure. A second state emphasized efficienty in performance of work and prescribed activities. PPBS, as the third stage, emphasized long-range planning through systems analysis seeking to measure future costs.

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[8] George A. Chambers, "PPBS-New Challenges and Opportunities for the Principal in Management," North Central Association Quarterly, Spring, 1968, p. 302.

[9] Allen Schick, "The Road to PPB: The Stages of Budget Reform," Planning Programming Budgeting: A Systems Approach to Management, ed. Fremont J. Lyden and Earnest G. Miller (Chicago: Markham Publishing Co., 1967), p. 26-52.

Schick expanded this observation and described the three distinct stages of budget reform.[10] The first stage had an emphasis on developing an adequate system of expenditure control. In this stage expenditure classifications were based on objects of expenditures. It was known in education as the line item budget.

The second stage in budget reform was the movement toward performance budgeting. This form of budgeting featured a move to management orientation and an attendant concern for work-efficiency. Schick stated that performance budgeting derived its ethos and much of its technique from cost accounting and scientific management.

The third state of budget reform with its emphasis on strategic planning was operationally stated by Arthur Smithies: "expenditure proposals should be considered in the light of the objectives they are intended to further and, in general, final expenditure decisions should not be made until all claims on the budget can be considered."[11] Schick stated that PPBS was the application of Smithies' suggestion.

Research relevant to educational PPBS is scarce and inconclusive. Kiser pointed out that "accurate knowledge about the actual benefits that will accrue to school districts which adopt PPBS can only, at the present, be surmised."[12] Kiser indicated that it may take as long as three to five years for projects such as the one he is associated with to complete the development and testing of PPBS models and to analyze the results. Research projects such as (1) Project ERMD, the Research Corporation of the Association of School Business Officials, (2) Project 5001, Center for the Advanced Study of Educational Administration,

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[10] Schick, pp. 26-33.

[11] Arthur Smithies, The Budgetary Process in the United States (New York: McGraw-Hill Publishers, 1955), p. 16.

[12] Chester Kiser and others (ed.), An Operational Model for the Application of Planning-Programming-Budgeting Systems in Local School Districts (Williamsville, New York: The Western New York School Development Council, 1970), p. 5.

(3) the State of California project, (4) the Governmental Studies Center, Fels Institute of Local and State Government, and (5) the Western New York School Development Council Project have been developed to determine the feasability and actual benefits of a PPB system.

The projects were found to be pointed toward four general purposes with regard to PPBS: (1) to conceptualize, (2) to test, (3) to disseminate and develop awareness, and (4) to disseminate and develop competence. Concentration of project endeavors were found to be spread among the following content areas: (1) a model or design for PPBS, (2) the operational elements of PPBS, and (3) the strategies for implementing PPBS.

It was found that all of the projects placed heavy dependence upon the construction of objectives in the development of their individual systems approaches. This orientation was found to be logical in that, according to Alkin and Bruno, the basic elements of any systems approach in general and PPBS in particular were: (1) the objectives, (2) the alternatives, (3) the costs, (4) the model (or models), and (5) the decision rule.[13] This conceptualization of the elements of a PPB system was in keeping with the definition of a PPB system offered by Mushkin who stated that a PPB system was "an integrated system to provide executives (and decision-makers) with better and more information for planning programs and for making choices among the optional ways funds can be devoted to achieve objectives."[14] Alkin and Bruno pointed out that the first step in PPBS is the selection of objectives. They further stated that "since these objectives must be couched in terms of output, and since they must be capable of evaluation, we are forced to state them in measureable and quantifiable terms."[15] Eidell indicated the needed specificity of objectives when he stated that "this set (of desired goals and objectives) is expected to be disaggregated to the level of objectives which are capable of measurement and stated behaviorally and which, therefore, indicate explicitly the desired outputs of the school district."[16]

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[13] Marvin C. Alkin and James E. Bruno, "Systems Approaches to Educational Planning," Social and Technological Change: Implications for Education (Eugene: University of Oregon Press, 1970), p. 193.

[14] Selma J. Mushkin and James R. Cleaveland, "Planning for Educational Development in a Planning, Programming, Budgeting System," Proceedings of the Eleventh National Conference on School Finance (Dallas, 1968), p. 60-61.

[15] Alkin and Bruno, p. 213.

[16] Eidell and Nagel, PPBS and . . . , p. 37.

Behavioral objectives. Behavioral objectives have been advocated for half a century. Tyler's writings during the 1920's and 1930's exhibited continuous concern toward the preparing of precise educational objectives. Writing in 1934 he stated:

> The problems are usually involved in formulating the objectives of a particular course. One is to get a list of objectives which is reasonably complete; that is, which includes all of the important objectives to be reached. The other is to state the objectives in such clear and definite terms that they can serve as guides in the making of the examination questions. Many statements of objectives are so vague and nebulous that, although they may sound well, they prove to be glittering generalities which are of little value as guides in teaching and useless in making examinations.[17]

According to Lindvall, the many textbooks on testing and evaluation that have been written during the past three decades have quite uniformly placed a major emphasis upon the importance of specifying objectives and have offered rather detailed suggestions for writing such statements.[18] Lindvall summarized these suggestions or criteria in the following two points:

> 1. Statements of specified objectives should be worded in terms of the pupil. When plans are being made for evaluation, the concern cannot be for what the teacher has done in the way of lecturing, demonstrating, or other means of providing instruction. The evaluation of achievement is carried out by determining what the pupils do. As a result, objectives must be pupil-centered.
>
> 2. Statements of specific objectives must include the exact behavior that the pupil is expected to exhibit. Since evaluation must be based on pupil performance, it can be planned and carried out with any degree of validity only if one knows exactly what the pupil should be able to do. This behavior that he will be able to exhibit may be a display of verbal knowledge and abilities such as listing certain facts, reciting given principles, or writing an explanation of some phenomenon . . . .

Research concerning the effectiveness of behavioral objectives as enhancers of individual accomplishment is conflicting. Odiorne summarized the results of studies conducted in the business arena.

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[17] Ralph W. Tyler, Constructing Achievement Tests (Columbus, Ohio: Bureau of Educational Research, Ohio State University, 1934), p. 16.

[18] C. M. Lindvall (ed.), Defining Educational Objectives (Pittsburgh: University of Pittsburgh Press, 1964), p. 3.

He stated that the findings of Metzger (1956), Gerard (1958), and Pelz (1957) showed that scientists who set their own goals are higher producers than those who don't. Insurance agents, according to a study by Likert and Willets (1940), were less productive when operating independently. Gurin, Veroff, and Feld concluded that participation was really a middle-class value, and grew out of the prior expectations of those being supervised. Odiorne reacted to the findings of the research as follows:

> The conclusion to be reached is that . . . participation of itself has no claim to being the core of a new pattern of managing that will guarantee high productivity if universally adopted by managers. There is some evidence, however, that a strong orientation toward goals, coupled with leader enthusiasm, ample rewards for achieving them, and the uniting of people in moving toward them, does have a beneficial effect.[19]

Two studies were located which related pupil achievement to behavioral objectives. The results of the studies were not compatible. The Neal dissertation, "The Value of Including Detailed and Clearly Defined Specific Objectives in the Instructor Guides Used in the United States Air Force Reserve Training Program,"[20] indicated that the inclusion of detailed and clearly defined specific objectives in the instructor's guide resulted in significantly greater learning in students as measured by achievement test results. The Baker dissertation, "The Differential Effect of Behavioral and Nonbehavioral Objectives Given to Teachers on the Achievement of Their Students,"[21] indicated no significant effect upon pupil learning.

Mager has been a champion of behavioral objectives since the publication of his book Preparing Instructional Objectives in early 1960's. In that book Mager indicated three basic steps to the construction of behavioral objectives. They were as follows: "*first*, identify the terminal behaviors by name; *second*, try to define the desired behavior further by describing the important conditions under which the behavior will be expected to occur; *third*, specify the criteria of acceptable performance. . . ."[22]

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[19] George S. Odiorne, *Management by Objectives* (New York: Pitman Publishing Corporation, 1965), p. 145.

[20] Philip A. Neal, "The Value of Including Detailed and Carefully Defined Specific Objectives in the Instructor Guides Used in the United States Air Force Reserve Training Program" (unpublished Doctor's dissertation, University of Pittsburgh, 1959).

[21] Eva Lee Baker, "The Differential Effect of Behavioral and Nonbehavioral Objectives Given to Teachers on the Achievement of their Students" (unpublished Doctor's dissertation, University of California, Los Angeles, 1967), p. 65.

[22] Robert F. Mager, *Preparing Instructional Objectives* (Palo Alto: Fearon Publishers, 1962), p. 12.

Other authors have indicated similar lists. According to Armstrong the elements necessary to make objectives more precise were: (1) instructional variable (student, teacher, etc.), (2) instructional variable (content, etc.), (3) behavioral variable (cognitive, affective, or psychomotor), (4) measurement (test or method), (5) time needed (one year, etc.), and (6) proficiency level (grade equivalent, etc.).[23]

Grondlund published a pamphlet entitled Stating Behavioral Objectives for Classroom Instruction in 1970. The pamphlet emphasized stating objectives as learning outcomes and defining objectives in terms of student behavior.[24] Grondlund also used the Bloom and Krathwohl Taxonomies in his discussion of the cognitive and affective domains. Although Grondlund called his objectives "instructional," he indicated that they (instructional objectives) directed attention to the student and to the types of behavior he is expected to exhibit. Grondlund believed that this type of objective shifted the emphasis from teacher to student and from learning process to learning outcomes.

Although Grondlund emphasized the different roles of "general" and "specific" instructional objectives, his guidelines for the construction of the objectives were quite similar. In summarizing, Grondlund suggested the following procedure for defining instructional objectives in behavioral terms:

> 1. State the general instructional objectives as expected learning outcomes.
> 2. Place under each general instructional objective a list of specific learning outcomes that describes the terminal behavior students are to demonstrate when they have achieved the objective.
>   a. Begin each specific learning outcome with a verb that specifies definite, observable behavior.
>   b. List a sufficient number of specific learning outcomes under each objective to describe adequately the behavior of students who have achieved the objective.
>   c. Be certain that the behavior in each specific learning outcome is relevant to the objective it describes.
> 3. When defining the general instructional objectives in terms of specific learning outcomes, revise and refine the original list of objectives as needed.
> 4. Be careful not to omit complex objectives (e.g., critical thinking, appreciation) simply because they are difficult to define in specific behavioral terms.
> 5. Consult reference materials for help in identifying the specific types of behavior that are most appropriate for defining the complex objectives.[25]

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[23] Robert J. Armstrong, and others (editors) Developing and Writing Behavioral Objectives (Tuscon: Educational Innovators Press, 1970), p. 52.

[24] Norman E. Grondlund, Stating Behavioral Objectives for Classroom Instruction (London: The Macmillan Company, 1970), p. 1.

[25] Grondlund, p. 17.

Miller, in his pamphlet entitled A Manager's Guide to Objectives, referred to behavioral objectives as verifiable performance objectives.[26] They were defined as a target action for change that has been specified using terms which enable change efforts and achievement to be demonstrated observed, and/or measured. Verifiable performance objectives were defined as having four components. The components were: (1) outcome, (2) rationale, (3) requirements, and (4) criterion. A fifth component, that of narrative, was also suggested but viewed as not necessary in all cases.

The outcome component was defined as a statement defining the expected or desired outcome, end and state, result, product, and/or benefit to be achieved.

The rationale component was defined as a statement that justifies and/or validates the expected or desired outcome, communicates the intent of organized effort, provides an incentive for involvement, and/or motivates people to participate in the achievement of an objective.

The requirements component was defined as a statement detailing the requisite conditions predicated by the nature of things, circumstances or defined purposes.

The criterion component was defined as a statement defining the standards to be used in measuring achievement, degree of change, rate of change, type of change, direction of change, commitment to change, and other factors in performance.

Kibler, Barker, and Miles, in their book, Behavioral Objectives and Instruction, drew upon the work of Tyler, Mager, Bloom, Krathwohl, and others. Kibler made a distinction between the two types of objectives he talked about. One type, the informational objective, only specified the learner, the observable behavior, and the product. The planning objective was defined as a more complex objective and, according to Kibler, should have the following five elements:

1. Who is to perform the desired behavior (e.g., "the student" or the learner").
2. The actual behavior to be employed in demonstrating mastery of the objective (e.g., "to write" or "to speak").
3. The result (i.e., the product or performance) of the behavior, which will be evaluated to determine whether the objective is mastered (e.g., "an essay" or "the speech).
4. The relevant conditions under which the behavior is to be performed (e.g., "in a one-hour quiz) or "in front of the class").

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[26] Donald R. Miller and others, A Manager's Guide to Objectives (San Mateo: Operation PEP, A state-wide project to prepare educational planners for California, October, 1969), p. 13.

5. The standard which will be used to evaluate the success of the product or performance (e.g., "90 percent correct" or "four out of five correct").[27]

Most authors describe the development of objectives within the PPB framework as the product of communication. Knezevich pointed out in a paper prepared for an AASA clinic on PPBS that the planning phase of PPB draws attention to the goals of the organization. Furthermore, Knezevich stated that PPBS is designed to attain a hierarchy of objectives within certain time constraints.[28] The California plan emphasized the development of goals and objectives through the involvement of the public at large as well as the professional staff.[29] The California plan defined the professional staff as teachers, department heads, principals, and central office personnel. Lopez, in an article entitled "Accountability in Education," commented that what is known as PPBS in government is known as "Management by Objectives" in private industry.[30] This statement was made with reference to the process of goal and objective setting within an organization. Lopez described the goal and objective setting process within an organization as follows:

> In its most commonly accepted form, "Management by Objectives" constitutes an orderly way of goal setting at the top, communication of these goals to lower-unit managers, the development of lower-unit goals that are phased into those set by the higher levels, and comparison of results in terms of goals. The program operates within a network of consultative interviews between supervisor and subordinate in which the subordinate receives ample opportunity to participate in the establishment of his own performance objectives. Thus, the whole concept is oriented to a value system based upon the results achieved; and the results must be concrete and measureable.[31]

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[27] Robert J. Kibler, Larry L. Barker, and David T. Miles, Behavioral Objectives and Instruction (Boston: Allyn and Bacon, Inc., 1970), p. 33.

[28] Steven J. Knezevich, "Probing the Planning and Programming Dimensions of PPBS" (paper presented at the AASA clinic on Program Budgeting (PPBS), a Resource Allocation Decision System for Education, at Miami, Florida, December 1-5, 1969), p. 3.

[29] Conceptual Design for a Planning, Programming, Budgeting System for California School Districts (Sacramento: California State Department of Education, 1969), p. 5.

[30] Felix W. Lopez, "Accountability in Education," Phi Delta Kappan, December, 1970, p. 232.

[31] Lopez, p. 232.

George S. Odiorne, in his book Management by Objectives, defined his system as a process whereby superior and subordinates of an organization jointly identify common goals, define each individual's major areas of responsibility in terms of results expected, guide the work toward the accomplishment of the expected results, and assess the contribution of each member.[32]

The word performance indicator came to the attention of this author as he read Hartley's book on PPB systems. In that book, Hartley indicated that performance indicators are standards of measurement that indicate system (or program) performance.[33] Dyer explained that the idea behind the development of educational performance indicators was:

> . . . to achieve a method of measuring the performance of educational systems in a way that is easily interpretable by educators and educational policy makers and at the same time avoids, as far as possible, assumptions that cannot be empirically supported . . . . To depict how a system is performing, we require a matrix of performance indices (time dimensions, changes in cognitive development, attitudinal development, interpersonal behavior, etc.).[34]

Mushkin, while directing the State-Local Finances Project at the George Washington University, wrote a paper concerning output measures for a multi-year program. In that paper, Mushkin indicated that there were three principal types of indicators: (1) volume, (2) quality, and (3) comparative. They were defined as follows:

> (1) Volume Indicators: These indicators display the quantity of services in terms of number of public consumers or beneficiaries such as number of persons assisted, or in terms of the volume of public goods provided such as gallons of water, ship berth facilities. In some instances the indicator takes account of the span of time during a yearly period, in others it does not.
>
> (2) Quality Indicators: Quality of a public service may be measured in terms of its characteristics, its duration, its content, or the extent or degree to which it serves its purposes.
>
> (3) Comparative Indicators: Indicators of quantity of public services may be designed to show the volume of services in relation

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[32] Odiorne, pp. 55-56.

[33] Harry J. Hartley, Educational Planning-Programming-Budgeting: A Systems Approach (Englewood Cliffs: Prentice-Hall, Inc., 1968), p. 167.

[34] Henry S. Dyer, "The Concept of Utility of Educational Performance Indicators" (paper presented at the Systems Science and Cybernetics Conference, October, 1967, Boston, Massachusetts), pp. 6 and 9. (Mimeographed).

to population, area, or some more specific measure of potential scope or of program need.[35]

Mushkin also emphasized the desire for simple indicators so as to avoid overburdening and confusing the user.[36]

Business services. Although the history of the business services component of a school district was somewhat clouded, its existence as a profession was traced back to 1841. Hill and Colmey offered a description of the business administrator. They indicated that the role of the business administrator was one of being a member of the top team in school management whose workers understood the prime goals of education, and whose efforts were directed toward maintaining and improving educational opportunity, providing the necessary funds, facilities and services required to make such educational opportunities available, and obtaining and developing the necessary non-instructional staff and community interrelationships as were required to make such educational opportunities possible.[37]

A status study was conducted by the Association of School Business Officials' Committee on Professionalization during 1968. Three thousand six hundred nineteen questionnaires were mailed out to ASBO members and 1,568 useable questionnaires were returned. Of those questionnaires, 1,478 were from members employed in public school districts. The study revealed that the most commonly held responsibility of school business administrators was financial planning; the least common responsibility was data processing.[38] According to the survey, the members responding had responsibility for the following tasks in rank order: (1) financial planning, (2) reporting, (3) accounting, (4) auditing, (5) supply management, (6) office management, (7) relationship to instructional staff, (8) plant and equipment manager, (9) insurance, (10) cost analysis, (11) supervision of non-instructional employees, (12) personnel management records, (13) transportation, (14) school lunch, and (15) debt service. All of the above tasks mentioned were done by at least 7 out of every 10 of the 1,478 public school business administrators that responded.

In the School Business Administrator, Bulletin No. 21 (Revised), Hill diagrammed a typical organization illustrating the school business chain of command.[39] As can be observed from Figure 2 Hill divided the business component into five separate areas: (1) buildings and grounds, (2) financial affairs, (3) transportation, (4) school lunch, and (5) non-certified personnel.

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[35] Selma J. Mushkin, "PPB Note 7: Output Measures for a Multi-Year Program and Financial Plan" (Washington: The George Washington University, 1967), pp. 9 and 14.

[36] Mushkin, p. 14.

[37] Frederick W. Hill and James W. Colmey, School Business Administration in the Smaller Community (Minneapolis: T. S. Denison & Co., Inc., 1964), p. 17.

[38] Richard E. Shands, "Position and Status of School Business Administrator," School Business Affairs, November, 1970, p. 275.

Other organizational schematics were researched by Stemnock. The study, entitled Structuring the Administrative Organization of Local School Systems, was developed from material drawn from widely used texts in business and industrial management as well as examples of actual organizational charts representing central office structures in effect during 1969.[41] The fifteen organizational charts displayed represented districts having a K-12 enrollment of from 2,364 students to 583,000 students. An observation of those organizations revealed that only three of the fifteen organizational charts placed responsibility for personnel administration under the business services division. The other areas listed by Hill were observed in the organizational charts as follows: (1) the buildings and grounds area--12 out of the 15, (2) the fiscal affairs area--15 out of the 15, (3) the transportation area--9 out of the 15, and (4) the food services area--12 out of the 15.

Methodology

From the review of literature, insight developed by the researcher, and the researcher's past experience a series of objectives and performance indicators were generated. The initial objective statements which were generated were submitted to the project director, persons assigned to the Bureau of Educational Research at the University of Denver, and to a pilot jury of local practitioners (see Appendix A). These people offered suggestions regarding the appropriateness of the objective statements as well as suggestions regarding the refinement of the statements. This step helped provide proper form, clarity, content, and semantic meaning to the statements in the rating instrument. Of the eighty-five initial objectives developed, fifty were placed into the rating instrument.

Categories in the rating instrument. The tentative objective statements placed into the rating instrument were grouped according to the findings of the review of literature concerning typical business services organizations. Confusion as to the placement of personnel services within a school district organization resulted in that category being eliminated from the final hypothetical district organization utilized in the study.

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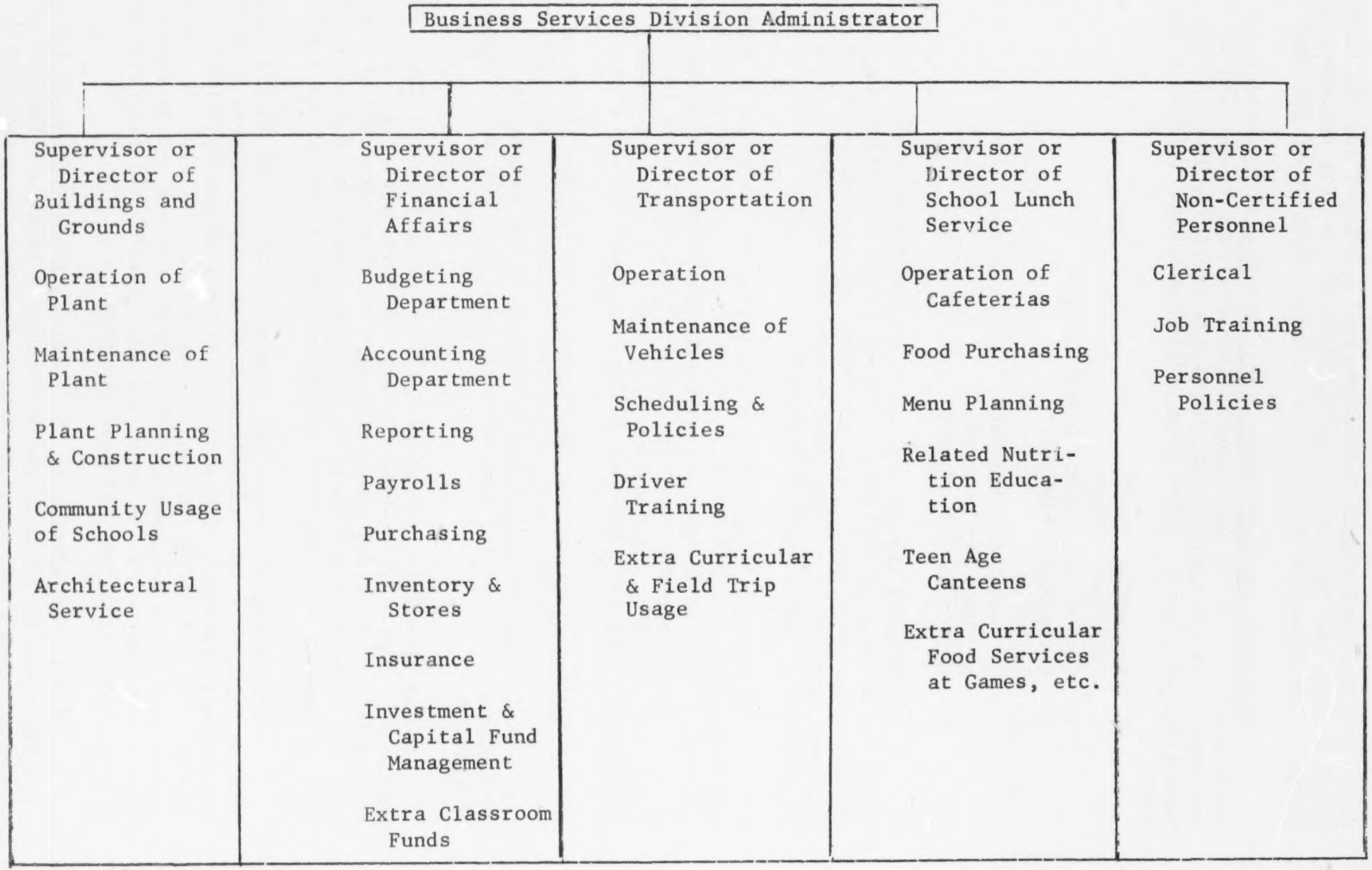
[39] Frederick W. Hill, "The Relationship of the School Business Operation to Other Areas of the Educational Organization," The School Business Administrator, Bulletin, No. 12, 1970, p. 35.

[41] Suzanne K. Stemnock, Structuring the Administrative Orgranization of Local School Systems, Circulars of the Educational Research Service, No. 2 (Washington D.C.: American Association of School Administrators and National Education Association Research Division, 1970), pp. 14-43.

Figure 2

School Business Services Organization[40]



Business Services Division Administrator

Supervisor or Director of Buildings and Grounds	Supervisor or Director of Financial Affairs	Supervisor or Director of Transportation	Supervisor or Director of School Lunch Service	Supervisor or Director of Non-Certified Personnel
Operation of Plant Maintenance of Plant Plant Planning & Construction Community Usage of Schools Architectural Service	Budgeting Department Accounting Department Reporting Payrolls Purchasing Inventory & Stores Insurance Investment & Capital Fund Management Extra Classroom Funds	Operation Maintenance of Vehicles Scheduling & Policies Driver Training Extra Curricular & Field Trip Usage	Operation of Cafeterias Food Purchasing Menu Planning Related Nutrition Education Teen Age Canteens Extra Curricular Food Services at Games, etc.	Clerical Job Training Personnel Policies

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[40] Hill, p. 39

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Objectives and performance indicators were developed for the division of business services and the following departments: (1) buildings and grounds, (2) financial affairs, (3) transportation, and (4) food services.

Objective and performance indicator form. The objectives and performance indicators were constructed according to the general model developed from the findings of the review of literature concerning behavioral objectives. That form, fully developed, indicated six components:

1. Rationale (why)
2. Performer (who)
3. Conditions (time, place, etc.)
4. Performance (what)
5. Criteria
    a. quantity (extent)
    b. quality (how well)
6. Method of Measurement

In applying the general model to the business area, the terminology was modified from an individual student to an organizational identification orientation. As a result, the performer was identified as the business services division or a department within that division and appeared as the subject of the objective statement.

In order to insure that no objective or performance indicator was eliminated from consideration because of peripheral details unique to individual districts, the rationale and conditions components were eliminated. Therefore, the objectives placed into the rating instrument contained only four components. They were: (1) the performer, (2) the performance, (3) the method of measurement, and (4) the criteria.

Format of the rating instrument. The rating instrument was developed from the information gained in part through the review of literature. The instrument was divided into two sections: (1) an introductory section, and (2) the tentative objective and performance indicator statements.

The introductory section laid the foundation for the objective and performance indicator statements that had been developed. A brief rationale for the study was presented. In that rationale it was explained that the efforts of the business services component of a school district were assumed to be a separate programmatical effort within a PPB system.

This being the case, the next topic discussed in the introductory section related to the establishment of an organizational framework for the business services division. The organizational structure utilized in the study was displayed, and it was pointed out that the structure was representative of the many duties commonly carried out by school business divisions. They were (1) buildings and grounds, (2) financial affairs, (3) transportation, and (4) food services.

A brief discussion on the constructional aspects of behavioral objectives was included in the introductory section. The objective statements developed contained four components for juror consideration:

(1) the performer, (2) the performance, (3) the method of measurement, and (4) the criteria.

The introductory section was concluded with a brief discussion about the desired outcome of the study. The jurors were informed that the purposes of the study were to (1) develop exemplary objectives and performance indicators for the business component of a school district, and (2) to establish a model for stating the objectives and performance indicators in the business area.

The objective statements were developed based upon the duties ascribed to the business services division. Each objective statement was separated into two parts: (1) the objective, and (2) the performance indicator. Jurors were also provided space to comment on each objective or performance indicator.

1. Objectives were developed for the following organizational entities: (1) the business services division, (2) the buildings and grounds department, (3) the financial affairs department, (4) the transportation department, and (5) the food services department. Tasks performed by the organizational units were also identified. The objectives constructed were designed to relate the unit to the specified task. Therefore, in terms of the general objectives model, the performer and performance was identified in the objective.

2. A minimum of one performance indicator was developed for each stated objective. In some cases as many as three performance indicators were developed for an individual objective. In all, eighty-one indicators were developed for the fifty objectives. The performance indicators were designed to state an acceptable level of organizational performance as well as the method to be used in measuring the performance. In terms of the general model for the construction of behavioral objectives, the performance indicators represented the components of the method of measurement and the criterion level for accomplishment.

3. Jurors were encouraged to state their reactions to the objective and performance indicator statements. To this end a comments box was placed on each page that contained objective and performance indicator statements.

Distribution of the rating instrument. The use of a jury of experts to validate the objective and performance indicator statements was determined at the beginning of the project. To that end early procedures provided for the selection of jury members. After the selection of jurors was accomplished, procedures promoting the speedy transportation of the document to and from the jurors were developed. This section described the activities that brought about (1) the identification of the jury members, and (2) the return of the completed instrument to the researcher.

Through a preliminary review of the literature and discussions with the project director of this study, four experts in the field of PPB systems were identified. They were (1) Dr. Frank Banghart, Director of the Educational Systems and Planning Center at Florida State University; (2) Dr. William Curtis, Research Project Director, Research Corporation of the Association of School Business Officials (RCASBO); (3) Dr. Harry Hartley, Associate Dean of the School of Education at New York University: and (4) Dr. David Novick, Director of the Cost Analysis Department at RAND Corporation. These four experts were asked to suggest six to eight individuals who might serve as jurors.

The result of the letter to the above four experts was a potential jury of twenty-two individuals. A letter was sent to each of the jurors requesting their participation in the study. As a result of that letter, twenty-one jurors indicated a desire to be involved in the study (see Appendix B).

On March 1, 1971, the rating instrument was mailed to each of the twenty-one jurors. Enclosed in the envelope with the instrument was a letter summarizing the project, a description of the contents of the instrument, and the directions for rating the objective and performance indicator statements. The letter stated that the juror was to return the rating instrument in the stamped envelope which was enclosed. Jurors were also informed that they would receive the results of the study once all the returns had been analyzed.

On March 23, 1971, a follow-up letter was mailed to the eleven jurors who had not responded. The letter was identical to the initial letter except that the first paragraph indicated that the rating instrument had not been received from the individual. A list of the individuals who had agreed to serve as jurors was included in this letter along with a second copy of the instrument.

On April 12, 1971, a second follow-up letter was mailed. This letter requested the eight jurors who had not responded to indicate whether or not they were interested in continuing their responsibility to the study. On April 19, 1971, phone calls were made to the five jurors who had not yet responded. Two indicated that they had already mailed the instrument, and the other three indicated they would do so in the near future. All but one juror returned the instrument. Of the twenty instruments returned, nineteen were useable.

Method of tabulation of the juror responses. As was pointed out in the directions enclosed in the rating instrument, there were potentially three separate areas of juror response: (1) objective ratings, (2) performance indicator ratings, and (3) comments. Accordingly, the purpose of this section of the chapter was to describe the methods utilized to tabulate the juror responses to the instrument.

Except for Objective 2.0.1.2 of the instrument, the juror was offered the opportunity to react to the objective by indicating appropriate or not appropriate. (On Objective 2.0.1.2 the juror was offered the choice of indicating agreement with the objective, but disagreement with a specified time allotment). Interpretation of the degree to which a juror response was an indication of agreement, i.e., validation of an objective, was determined utilizing the following formula

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*A full explanation of the objective and performance indicator numbering system may be found in Appendix C.

$$\text{appropriate responses} > \left[p + 1.64\sqrt{\frac{pq}{N}} \right] N^{*}$$

where p and q were equal to .5. Therefore, validation of a given objective was dependent upon the number of appropriate responses in relation to the number of total responses.

A sample computation using nineteen total responses was as follows:

$$\begin{aligned}
\text{appropriate responses} &> \left[.5 + 1.64 \sqrt{\frac{.5(.5)}{19}} \right] (19) \\
&> \left[.5 + 1.64 \sqrt{.0131} \right] (\ 9) \\
&> \left[.5 + 1.64 \quad (.1144) \right] (19) \\
&> \left[.5 + .1877 \right] (19) \\
&> .6877 \quad (19) \\
&> 13.06
\end{aligned}$$

Therefore, an objective or performance indicator which was rated by all nineteen jurors would have had to have at least fourteen appropriate responses. Table 1 denoted the needed level of appropriate responses in relation to the various total responses.

Jurors were offered the opportunity to react to the performance indicator statements by indicating appropriate, moderately appropriate, or not appropriate. As indicated in the directions, a juror who agreed with the method of measurement, but disagreed with the level of performance was instructed to rate the performance indicator moderately appropriate. The juror was then instructed to indicate the level of performance that would make the performance indicator appropriate. Interpretation of the degree to which the juror responses were an indication of agreement, i.e., validation of a performance indicator, was determined utilizing the same formula that was used for validation of the objectives. Performance indicators that were marked moderately

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*See Appendix D for a discussion of the standard error of proportion method.

Table 1

Percent and Response Level Necessary for Objective and Indicator Validation at the .05 Level

Total Responses	Percent of Total Responses Needed for Validation	Number of Responses Needed for Validation
8	78.97%	7
9	77.30	7
10	75.93	8
11	74.71	8
12	73.65	9
13	72.72	10
14	71.88	10
15	71.13	11
16	70.87	12
17	69.88	12
18	69.34	13
19	68.77	14

appropriate were placed in the appropriate category for the purpose of this test. Performance indicators relating to objectives not validated were not analyzed.

Jurors were asked to comment upon objectives and performance indicators that were marked not appropriate. In practice the jurors commented on not only the not appropriate responses, but also the appropriate and moderately appropriate responses. Comments were recorded according to their reference to a specific objective or performance indicator. The comments were summarized in the narrative when useful for objective or performance indicator clarification.

JUROR RESPONSES TO THE OBJECTIVE AND PERFORMANCE INDICATOR STATEMENTS FOR THE BUSINESS SERVICES DIVISION

Five objectives relating to the task of support normally associated with the business services division were submitted to the jury for evaluation and comment. Four of the five objectives each had two performance indicators. The other objective had only one performance indicator. Juror responses to the objectives and performance indicators for the business division were displayed in Table 2. The determination of the critical value necessary for validation was made from Table 1 found on page 22.

Objective 2.0.1.1 The Business Services Division Will Provide Effective Monitoring of all Subordinate Department's Program Efforts

This objective was rated appropriate by fifteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses was fourteen. This objective was validated.

Four jurors questioned the word "monitoring." Most indicated that monitoring was too vague, but no suggestion was given for improvement. One juror indicated that he would change the words "provide effective" to "be responsible for."

Indicator 2.0.1.1.1 as measured by the achievement of not less than 75 percent of each department's total objectives. Twelve of the fifteen jurors who responded to this indicator rated it appropriate or moderately appropriate. The computed critical number of appropriate or moderately appropriate responses necessary was eleven. The indicator was validated.

Of the twelve affirmative responses, six indicated agreement with the stated level of performance. Four jurors suggested a 90 percent lev of performance, one juror suggested an 80 percent level of performance, and one juror suggested a 100 percent level of performance.

The comments concerning this indicator revealed opposition to the assignment of a percent of achievement for the business services area. An opposing point of view was taken by one juror who advised that the percentage of accomplishment should be set higher.

Table 2

Juror Responses to Objective and Performance Indicator Statements for the Business Services Division

Objectives	Response A	Response NA	Performance Indicators	Response A or MA	Response NA
2.0.1.1 The Business Services Division will provide effective monitoring of all subordinate department's program efforts	15*	4	2.0.1.1.1 as measured by the achievement of not less than 75 percent of each department's total objectives.	12*	3
2.0.1.2 The Business Services Division will employ modern management techniques through the generation and maintenance of five-year long-range program and cost plans	18*	1	2.0.1.2.1 for all subordinate departments.	17*	0
			2.0.1.2.2 so that the proposed cost of a program will not increase more than 10 percent from the projected cost in a given year and the actual budget request for that program for inclusion into the annual budget for that year.	6	11
2.0.1.3 The Business Services Division will employ modern management techniques through the use of exception reporting	18*	1	2.0.1.3.1 by all subordinate departments.	17*	1
			2.0.1.3.2 for any report having any deviation from the expected norms.	15*	3

Table 2 (continued)

Objectives	Response		Performance Indicators	Response	
	A	NA		A or MA	NA
2.0.1.4 The Business Services Division will employ modern management techniques through the use of management by objectives techniques	18*	1	2.0.1.4.1 in all subordinate departments.	18*	0
			2.0.1.4.2 as measured by the agreement between division and respective department directors upon 90 percent of that department's objectives.	11	7
2.0.1.5 By March of each year, the Business Services Department will publish the district's five-year long-range plan	12	6	2.0.5.1 which will be comprised of at least 90 percent of the long-range plans developed by each department.	-	-
			2.0.1.5.2 in such a quantity that there will be at least one copy for every 10 district employees.	-	-

*Validated

Objective 2.0.1.2 The Business Services Division Will Employ Modern Management Techniques Through the Generation and Maintenance of Five-Year Long-Range Program and Cost Plans

This objective was rated appropriate by eighteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated. (This objective presented the juror with the choice of suggesting the appropriate time span for long-range plans. Thirteen of those eighteen jurors who responded affirmatively indicated agreement with the stated five-year time frame. Of the remaining five jurors, two indicated a 3 year time frame, one indicated a 3-5 year time frame, one indicated a 10 year time frame, and one indicated a multi-year time frame).

The comments concerning this objective were generally concerned with the time frame. One individual stated that some business administrators had attempted to develop 10-15-20 year capital improvement plans. Two individuals stated that the term "modern" was not a strong one and that examples such as PERT, PPBS, etc., would help clarify the intent of the objective.

Indicator 2.0.1.2.1 for all subordinate departments. This indicator was rated appropriate or moderately appropriate by all of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Only one response indicated disagreement with the stated level of performance. That juror suggested 80 percent as an appropriate level.

Indicator 2.0.1.2.2 so that the proposed cost of a program will not increase more than 10 percent from the projected cost in a given year and the actual budget request for that program for inclusion into the annual budget for that year. This indicator was rated appropriate or moderately appropriate by six of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was not validated. Since the indicator was not validated, no analyses was made of the suggested levels of performance.

Objective 2.0.1.3 The Business Services Division Will Employ Modern Management Techniques Through the Use of Exception Reporting

This objective was rated appropriate by eighteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.0.1.3.1 by all subordinate departments. This indicator was rated appropriate or moderately appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses was thirteen. This performance indicator was validated.

Of the seventeen affirmative responses, one response was moderately appropriate. No suggestion was made for an appropriate level of performance by that juror.

Indicator 2.0.1.3.2 for any report having any deviation from the expected norms. This indicator was rated appropriate or moderately appropriate by fifteen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Out of the fifteen affirmative responses, ten jurors disagreed with the stated level of performance indicating that they would rather establish the level of performance through an agreement between the business division and the respective department program directors.

Objective 2.0.1.4 The Business Services Division Will Employ Modern Management Techniques Through The Use of Management by Objectives Techniques

This objective was rated appropriate by eighteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.0.1.4.1 in all subordinate departments. This indicator was rated appropriate by all of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was validated. None of the jurors suggested a level of performance other than the level stated in the indicator.

Indicator 2.0.1.4.2 as measured by the agreement between division and respective department directors upon 90 percent of that department's objectives. This indicator was rated appropriate or moderately appropriate by eleven of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was not validated. Since the indicator was not validated, no analysis was made of the suggested levels of performance.

Objective 2.0.1.5 By March of Each Year, The Business Services Department Will Publish the District's Five-Year Long-Range Plan

This objective was rated appropriate by twelve of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was not validated. Since the objective was not validated, no analysis was made of the performance indicators.

JUROR RESPONSES TO THE OBJECTIVE AND PERFORMANCE INDICATOR STATEMENTS FOR THE BUILDINGS AND GROUNDS DEPARTMENT

Nine objectives relating to the tasks normally associated with the buildings and grounds department were submitted to the jury. Six of those objectives had two indicators each. The other three objectives had only one indicator each. Juror responses to the objectives and indicators for the buildings and grounds department were displayed in Table 3. The determination of the critical value necessary for validation was made from Table 1 on page 22.

Objective 2.1.1.1 The Buildings and Grounds Department Will Perform Activities Concerned With Keeping the District's Facilities Open

This objective was rated appropriate by fourteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.1.1.1.1 with no building being closed down by any legal agency due to the lack of maintenance of proper legal standards. This indicator was rated appropriate or moderately appropriate by all of the fourteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon fourteen total responses, was ten. This performance indicator was validated.

Only one of the fourteen jurors did not agree with the stated level of performance. That juror offered no suggestion for an appropriate level of performance.

Objective 2.1.1.2 The Buildings and Grounds Department Will Perform the District Designated Daily, Weekly, Monthly, etc., Housekeeping Activities

This objective was rated appropriate by seventeen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.1.1.2.1 as determined by obtaining a 98 percent accomplishment rating on the pre-established district inspection checklist when applied by the facility's chief administrator or the buildings and grounds supervisor. This indicator was rated appropriate or moderately appropriate by all of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Of those four jurors who disagreed with the stated level of performance, only two had suggestions for different levels. They were 75 percent and 100 percent.

Table 3

Juror Responses to the Objective and Performance Indicator Statements for the Buildings and Grounds Department

Objective	Responses: A	Responses: NA	Performance Indicator	Responses: A or MA	Responses: NA
2.1.1.1 The Buildings and Grounds Department will perform activities concerned with keeping the district's facilities open	14*	5	2.1.1.1.1 with no building being closed down by any legal agency due to the lack of maintenance of proper legal standards.	14*	0
2.1.1.2 The Buildings and Grounds Department will perform the district designated daily, weekly, monthly, etc., house-keeping activities	17*	2	2.1.1.2.1 as determined by obtaining a 98 percent accomplishment rating on the pre-established district inspection check-list when applied by the facility's chief administrator or the Buildings and Grounds supervisor.	17*	0
			2.1.1.2.2 as measured by less than 1 percent valid employee complaints per building regarding department services.	11	6
2.1.1.3 The Buildings and Grounds Department will remove snow accumulations from entrances, exits, and walkways of district facilities prior to all periods of building use	17*	2	2.1.1.3.1 as measured by less than 10 percent of occurred accidents attributable to improper snow removal in the opinion of the Building and Grounds supervisor.	9	8
			2.1.1.3.2 as measured by complaints from no more than 5 percent of the total amount of school district administrators per month.	8	9

Table 3 (continued)

Objectives	Responses		Performance Indicators	Responses	
	A	NA		A or MA	NA
2.1.2.1 The Buildings and Grounds Department will respond promptly to authorized requests for either regular maintenance or repair of district grounds, buildings, and equipment, or for emergency repair of same	17*	1	2.1.2.1.1 as measured by a time lag of no more than 10 days between the receipt of an approved request for regular maintenance or repair and the initiation of work on that repair.	16*	1
			2.1.2.1.2 as measured by a time lag of no more than 4 hours between the notification of an emergency repair need and the initiation of work on that repair.	13*	4
2.1.2.2 The Buildings and Grounds Department will record promptly and accurately all repair work done on school district property and equipment	13	6	2.1.2.2.1 within one week after the completion of the work.	-	-
			2.1.2.2.2 with no more than 5 percent error between the record and the actual work performed.	-	-
2.1.2.3 The Buildings and Grounds Department will develop a five-year program outlining year-by-year major maintenance projects such as roof repair, painting, boiler replacement, flooring, etc.	18*	1	2.1.2.3.1 to be completed two months prior to the initial presentation of the proposed district budget to the Board of Education.	17*	1

Table 3 (continued)

Objectives	Responses		Performance Indicators	Responses	
	A	NA		A or MA	NA
2.1.2.4 The Buildings and Grounds Department will produce and yearly update a plan for the orderly replacement of major equipment	19*	0	2.1.2.4.1 to be completed two months prior to the initial presentation of the district financial budget to the Board of Education.	19*	0
			2.1.2.4.2 which will display at least 95 percent of the costs needed for new equipment in future years.	16*	3
2.1.3.1 The Buildings and Grounds Department will yearly project the October 1 district student population	6	12	2.1.3.1.1 with less than 3 percent error in the total population projection when compared with the actual enrollment.	-	-
			2.1.3.1.2 for a period of not less than five years into the future.	-	-
2.1.4.1 The Buildings and Grounds Department will develop a cost schedule for renting district facilities for community use	17*	2	2.1.4.1.1 so that the entire costs related to the use of a facility are born by the user.	11	5

*Validated

Indicator 2.1.1.2.2 as measured by less than 1 percent valid employee complaints per building regarding department service. This indicator was rated appropriate or moderately appropriate by eleven of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was not validated. No analysis was made of the juror suggestions for a level of performance.

Objective 2.1.1.3 The Buildings and Grounds Department Will Remove Snow Accumulations from Entrances, Exits, and Walkways of District Facilities Prior to all Periods of Building Use

This objective was rated appropriate by seventeen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.1.1.3.1 as measured by less than 10 percent of occurred accidents attributable to improper snow removal in the opinion of the buildings and grounds supervisor. This indicator was rated appropriate or moderately appropriate by nine of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was not validated. No analysis was made of the juror suggestions for a level of performance.

Indicator 2.1.1.3.2 as measured by complaints from no more than 5 percent of the total amount of school district administrators per month. This indicator was rated appropriate or moderately appropriate by eight of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was not validated. No analysis was made of the juror suggestions for a level of performance.

Objective 2.1.2.1 The Buildings and Grounds Department Will Respond Promptly to Authorized Requests for Either Regular Maintenance or Repair of District Grounds, Buildings, and Equipment, or For Emergency Repair of Same

This objective was rated appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.1.2.1.1 as measured by a time lag of no more than 10 days between the notification of an emergency repair need and the initiation of work on that repair. This indicator was rated appropriate or moderately appropriate by sixteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Of the sixteen jurors who responded affirmatively four suggested a level of performance other than the 10 days stated. Two suggested 5 days, one suggested 3 days, and the other suggested 7 days.

Indicator 2.1.2.1.2 as measured by a time lag of no more than 4 hours between the notification of an emergency repair need and the initiation of work on that repair. This indicator was rated appropriate or moderately appropriate by thirteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated.

One juror suggested that no time lag should be allowed in emergency cases. The other two jurors suggested 2 and 8 hours time lag.

Objective 2.1.2.2 The Buildings and Grounds Department Will Record Promptly and Accurately All Repair Work on School District Property and Equipment

This objective was rated appropriate by thirteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was not validated. Since the objective was not validated, no analysis was made of the indicators.

Objective 2.1.2.3 The Buildings and Grounds Department Will Develop a Five-Year Program Outlining Year-By-Year Major Maintenance Projects Such as Roof Repair, Painting, Boiler Replacements, Flooring, etc.

This objective was rated appropriate by eighteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.1.2.3.1 to be completed two months prior to the initial presentation of the proposed district budget to the board of education. This indicator was rated appropriate or moderately appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon eighteen total responses, was thirteen. This performance indicator was validated.

One of the seventeen jurors suggested a level of performance other than the one stated. That level was three months.

Objective 2.1.2.4 The Buildings and Grounds Department Will Produce and Yearly Update a Plan for the Orderly Replacement of Major Equipment

This objective was rated appropriate by all of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.1.2.4.1 to be completed two months prior to the initial presentation of the district financial budget to the board of education. This indicator was rated appropriate or moderately appropriate by all of the nineteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon nineteen total responses, was fourteen. This performance indicator was validated.

Four of the nineteen jurors suggested a performance level other than the stated two months time span. Their suggestions were one month, three months (2 jurors), and six months.

Indicator 2.1.2.4.2 which will display at least 95 percent of the costs needed for new equipment in future years. This indicator was rated appropriate or moderately appropriate by sixteen of the nineteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon nineteen total responses, was fourteen. This performance indicator was validated.

Three of the five who rated the indicator moderately appropriate gave a suggestion for a more appropriate level of performance. Two suggested 100 percent and one suggested 70 percent.

Objective 2.1.3.1 The Buildings and Grounds Department Will Yearly Project the October 1 District Student Population

This objective was rated appropriate by six of the eighteen responding jurors. The critical number of appropriate responses needed based upon a total of eighteen responses, was thirteen. This objective was not validated. Since the objective was not validated, no analysis was made of the indicators.

Objective 2.1.4.1 The Buildings and Grounds Department Will Develop a Cost Schedule for Renting District Facilities for Community Use

This objective was rated appropriate by seventeen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.1.4.1.1 so that the entire costs related to the use of a facility are born by the user. This indicator was rated appropriate or moderately appropriate by eleven of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon sixteen total responses, was twelve. This performance indicator was not validated. Since the indicator was not validated no analysis was made of the suggested levels of performance.

JUROR RESPONSES TO THE OBJECTIVE AND PERFORMANCE INDICATOR STATEMENTS FOR THE FINANCIAL AFFAIRS DEPARTMENT

Nineteen objectives relating to the financial affairs department were submitted to the jury for evaluation and comment. Seven of those objectives had only one performance indicator, eleven had two performance indicators, and the remaining objective had three indicators. Juror responses to the objectives and performance indicators were displayed in Table 4. The determination of the critical value necessary for validation was made from Table 1 found on page 22.

Objective 2.2.1.1 Each Department Head Shall Submit In Correct Form, Requests for Expenditures for Inclusion Into the Annual Budget After Receipt of Comprehensive Financial Affairs Department Instructions

This objective was rated appropriate by sixteen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.2.1.1.1 as measured by 95 percent of all operating and capital outlay requests turned in, in correct format. This indicator was rated appropriate or moderately appropriate by all of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon sixteen total responses, was twelve. This performance indicator was validated.

Five of the sixteen jurors indicated a performance level other than the one stated. All five jurors suggested a 100 percent level of performance.

Indicator 2.2.1.1.2 as measured by requests for explanation of budget preparation procedures equalling no more than 10 percent of the total amount of district personnel responsible for operating and capital outlay requests. This indicator was rated appropriate or moderately appropriate by thirteen of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon sixteen total responses, was twelve. This performance indicator was validated.

Only one of the two jurors who indicated moderately appropriate gave a suggestion for a level of performance other than the level stated. That juror indicated that an appropriate level would be no requests for explanation.

Objective 2.2.1.2 The Financial Affairs Department Will Prepare the Annual School District Budget in Compliance With All State Regulations and Directives So That

This objective was rated appropriate by seventeen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.2.1.2.1 no exceptions are detected by the state agency to the completed budget. This indicator was rated appropriate

Table 4

Juror Responses to the Objective and Performance Indicator Statements for the Financial Affairs Department

Objectives	Responses		Performance Indicators	Responses	
	A	NA		A or MA	NA
2.2.1.1 Each department head shall submit in correct form, requests for expenditures for inclusion into the annual budget after receipt of comprehensive Financial Affairs Department instructions	16*	2	2.2.1.1.1 as measured by 95 percent of all operating and capital outlay requests turned in, in correct format.	16*	0
			2.2.1.1.2 as measured by requests for explanation of budget preparation procedures equalling no more than 10 percent of the total amount of district personnel responsible for operating and capital outlay requests.	13*	3
2.2.1.2 The Financial Affairs Department will prepare the annual school district budget in compliance with all state regulations and directives so that	17*	2	2.2.1.2.1 no exceptions are detected by the state agency to the completed budget.	16*	0
2.2.1.3 The Financial Affairs Department will publish the integrated long-range plans of the Business Services' Division	16*	3	2.2.1.3.1 one month prior to the initial presentation of the yearly budget to the Board of Education.	16*	0
			2.2.1.3.2 in a quantity of no less than fifty copies.	6	10
			2.2.1.3.3 which will represent the plans of at least 90 percent of the divisions' departments.	14*	2

Table 4 (continued)

Objectives	Responses: A	Responses: NA	Performance Indicators	Responses: A or MA	Responses: NA
2.2.2.1 The Financial Affairs Department will accurately project school district income and expenditures	17*	1	2.2.2.1.1 for at least five years in advance.	17*	0
			2.2.2.1.2 with less than 2 percent discrepancy between the most recent current year projected expenditures and income, and the actual expenditures and income.	14*	3
2.2.2.2 The Financial Affairs Department will accurately account for all the financial transactions entered into by the school district monthly	18*	0	2.2.2.2.1 as measured by a fiscal report submitted to the Board of Education for inclusion into the board minutes representing at least 95 percent of all the transactions that occurred.	15*	3
			2.2.2.2.2. as measured by the receipt of yearly positive external audit report.	16*	2
2.2.3.1 The Financial Affairs Department will produce and distribute accurate W-2 income tax forms on or before January 15	14*	5	2.2.3.1.1 with no late deliveries.	14*	0
			2.2.3.1.2 with less than 1 percent employee dissatisfaction as measured by valid employee complaints.	12*	2

Table 4 (continued)

Objective	Responses A	Responses NA	Performance Indicators	Responses A or MA	Responses NA
2.2.3.2 The Financial Affairs Department will record promptly and accurately all salaries paid to district employees	18*	0	2.2.3.2.1 within one week after production of a given payroll.	17*	1
			2.2.3.2.2. with no errors.	16*	1
2.2.3.3 The Financial Affairs Department will promptly record and file all official district-wide financial documents	18*	0	2.2.3.3.1 within two days after receipt of a given document.	17*	1
2.2.4.1 The Financial Affairs Department will produce and distribute accurate paychecks to all employees according to the pre-determined published time schedule	19*	0	2.2.4.1.1 with no late deliveries.	19*	0
			2.2.4.1.2 with less than 1 percent employee dissatisfaction as measured by valid employee complaints.	15*	2
2.2.5.1 The Financial Affairs Department will promptly and accurately prepare and distribute all district approved purchase orders	17*	1	2.2.5.1.1 with a time lag of no more than three days from the time of receipt of final approval to write the purchase order and transmission of said order from the district to the intended recipient.	15*	2
			2.2.5.1.2 with no more than 1 percent error in the purchase order preparation process.	17*	0

Table 4 (continued)

Objectives	Responses		Performance Indicators	Responses	
	A	NA		A or MA	NA
2.2.5.2 The Financial Affairs Department will prepare and issue bid calls which encourage wide and accurate bidder response by clearly identifying the items, their specifications, and the desired bidding procedure	17*	0	2.2.5.2.1 as measured by 90 percent of the bids received conforming to the bid call specifications.	15*	2
			2.2.5.2.2 as measured by receipt of bids from 80 percent of the parties deemed eligible by the Director of Business Affairs.	11	6
2.2.5.3. The Financial Affairs Department will present invoices to the Board of Education for approval of payment within 30 days after receipt of merchandise	14*	4	2.2.5.3.1 equaling no less than 90 percent of the value at the total amount of goods received during that period.	13*	1
2.2.5.4 The Financial Affairs Department will pay bills indicating cost reductions for prompt payment	19*	0	2.2.5.4.1 through payment within the specified time of all bills indicating cost reduction for prompt payment.	18*	1
			2.2.5.4.2 when such payment results in a cost savings at least equal to the cost of processing the payment.	11	8
2.2.6.1 The Financial Affairs Department will accurately inventory all goods on hand in the district warehouse	19*	0	2.2.6.1.1 as measured by no inabilities to deliver goods recorded as "in stock" on current inventory list because of inventory inaccuracies.	17*	2
			2.2.6.1.2 as measured by a discrepancy of no more than 3 percent between the reported volume of a stock item and the actual volume of that item.	17*	1

Table 4 (continued)

Objectives	Responses A	Responses NA	Performance Indicators	Responses A or MA	Responses NA
2.2.6.2 The Financial Affairs Department will maintain an accurate inventory records of all district equipment holdings	19*	0	2.2.6.2.1 as measured by comparing the "record" against a 10 percent sample of equipment holdings within a given district facility and allowing no more than a 1 percent discrepancy.	19*	0
2.2.6.3 The Financial Affairs Department will maintain an accurate inventory record of all district-owned sites and facilities annually	16*	2	2.2.6.3.1 with no errors.	15*	1
2.2.7.1 The Financial Affairs Department will identify and list for the purpose of bonding, all school personnel who handle district monies	17*	1	2.2.7.1.1 with no mistakes.	17*	0
2.2.8.1 The Financial Affairs Department will select depositories so that	13*	2	2.2.8.1.1 the depositorie's fixed assets do not exceed 50 percent of capital funds.	8	4
			2.2.8.1.2 each has at least $100,000 in deposits.	7	4
2.2.9.1 The Financial Affairs Department will maintain an extra classroom fund	8	9	2.2.9.1.1 equal to the cost of adding 5 percent of existing classrooms.	-	-

*Validated

or moderately appropriate by all of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon sixteen total responses, was twelve. This performance indicator was validated. No juror made a suggestion regarding an alternative level of performance.

Objective 2.2.1.3 The Financial Affairs Department Will Publish the Integrated Long-Range Plans of The Business Services Division

This objective was rated appropriate by sixteen of the nineteen responding jurors. The critical number of appropriate responses needed based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.2.1.3.1 one month prior to the initial presentation of the yearly budget to the board of education. This indicator was rated appropriate or moderately appropriate by all of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon sixteen total responses, was twelve. This performance indicator was validated.

Two of the four jurors who rejected the suggested level of performance indicated they would rather see a performance level of two months. The other two jurors indicated performance levels of three and six months.

Indicator 2.2.1.3.2 in a quantity of no less than fifty copies. This indicator was rated appropriate or moderately appropriate by six of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon sixteen total responses, was twelve. This performance indicator was not validated. Since the indicator was not validated, no analysis was made of the suggested levels of performance.

Indicator 2.2.1.3.3 which will represent the plans of at least 90 percent of the divisions' departments. This indicator was rated appropriate or moderately appropriate by fourteen of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses was twelve. This performance indicator was validated.

Of those fourteen affirmative responses nine indicated disagreement with the stated 90 percent level of performance. Seven of those nine jurors suggested 100 percent as the appropriate level of performance. One juror suggested 95 percent as the appropriate level of performance.

Objective 2.2.2.1 The Financial Affairs Department Will Accurately Project School District Income and Expenditures

This objective was rated appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.2.2.1.1 for at least five years in advance. This indicator was rated appropriate or moderately appropriate by all of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated.

Three jurors indicated a disagreement with the stated 5 year level of performance. Two suggested a 3 year level of performance and the other juror suggested a 1-2 year level of performance.

Indicator 2.2.2.1.2 with less than 2 percent discrepancy between the most recent current year projected expenditures and income, and the actual expenditures and income. This indicator was rated appropriate or moderately appropriate by fourteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Four jurors indicated a level of performance other than the stated 2 percent level. Two of those indicated 5 percent, one juror indicated 2-3 percent, and the fourth juror indicated a 5-10 percent level during the first year and a 10-15 level each projection year thereafter.

Objective 2.2.2.2 The Financial Affairs Department Will Accurately Account for all the Financial Transactions Entered Into by the School District Monthly

This objective was rated appropriate by all of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.2.2.2.1 as measured by a fiscal report submitted to the board of education for inclusion into the board minutes representing at least 95 percent of all the transactions that occurred. This indicator was rated appropriate or moderately appropriate by fifteen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Four jurors indicated a level of performance other than the 95 percent level stated in the indicator. All of those jurors suggested a 100 percent level as an appropriate level of performance.

Indicator 2.2.2.2.2 as measured by the receipt of yearly positive external audit report. This indicator was rated appropriate or moderately appropriate by sixteen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Only one juror indicated a level of performance other than the one stated in the indicator. That juror suggested that no more than one exception in the annual audit report would be an appropriate level of performance.

Objective 2.2.3.1 The Financial Affairs Department Will Produce and Distribute Accurate W-2 Income Tax Forms on or Before January 15

This objective was rated appropriate by fourteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses was fourteen. This objective was validated.

The juror comments concerning this objective suggested that a date of Janaury 30 or February 1 would be a much more realistic date than the stated January 15. One juror indicated that this item touched on employee morale and was therefore a good item.

Indicator 2.2.3.1.1 with no late deliveries. This indicator was rated appropriate or moderately appropriate by all of the fourteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon fourteen total responses, was ten. This performance indicator was validated.

Three of the jurors indicated a level of performance other than that level stated in the indicator. Two of those jurors indicated that late deliveries equal to no more than 1 percent of the total W-2 forms produced would be an appropriate level of performance. The other juror indicated that a 5 percent late delivery level would be appropriate.

Indicator 2.2.3.1.2 with less than 1 percent employee dissatisfaction as measured by valid employee complaints. This indicator was rated appropriate or moderately appropriate by twelve of the fourteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon fourteen total responses, was ten. This performance indicator was validated.

Only one juror suggested a level of performance other than the level stated in the indicator That juror suggested that no employee dissatisfaction would be an appropriate level of performance.

Objective 2.2.3.2 The Financial Affairs Department Will Record Promptly and Accurately all Salaries Paid to District Employees

This objective was rated appropriate by all of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.2.3.2.1 within one week after production of a given payroll. This indicator was rated appropriate or moderately appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Two jurors indicated a level of performance other than the one week level stated. Both of those jurors suggested a twenty-four hour level of performance.

Indicator 2.2.3.2.2 with no errors. This indicator was rated appropriate or moderately appropriate by sixteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Two jurors suggested a level of performance other than the level stated. Both of those jurors indicated that 1 percent error would be appropriate.

Objective 2.2.3.3 The Financial Affairs Department Will Promptly Record and File all Official District-Wide Financial Documents

This objective was rated appropriate by all of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.2.3.3.1 within two days after receipt of a given document. This indicator was rated appropriate or moderately appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was validated. No juror comments were made suggesting a level of performance other than the level stated in the indicator.

Objective 2.2.4.1 The Financial Affairs Department Will Produce and Distribute Accurate Paychecks to All Employees According to the Pre-determined Published Time Schedule

This objective was rated appropriate by all of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.2.4.1.1 with no late deliveries. This indicator was rated appropriate by all of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This indicator was validated.

Two jurors indicated a level of performance other than the level stated in the indicator. One juror indicated that one quarter percent would be an appropriate performance level; the other juror indicated a 1 percent level of performance.

Indicator 2.2.4.1.2 with less than 1 percent employee dissatisfaction as measured by valid employee complaints. This indicator was rated appropriate or moderately appropriate by fifteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Two jurors suggested a level of performance other than the level stated in the indicator. Both of those jurors suggested that no employee dissatisfaction would be an appropriate level of performance.

Objective 2.2.5.1 The Financial Affairs Department Will Promptly and Accurately Prepare and Distribute all District Approved Purchase Orders

This objective was rated appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.2.5.1.1 with a time lag of no more than three days from the time of receipt of final approval to write the purchase order and transmission of said order from the district to the intended recipient. This indicator was rated appropriate or moderately appropriate by fifteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Only one juror indicated a level of performance other than the three day time lag suggested in the indicator. That juror suggested a five day time lag.

Indicator 2.2.5.1.2 with no more than 1 percent error in the purchase order preparation process. This indicator was rated appropriate or moderately appropriate by all of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was twelve. This indicator was validated.

Three of the jurors denoted a level of performance other than the level stated in the indicator. All three of them suggested that no error should be allowed.

Objective 2.2.5.2 The Financial Affairs Department Will Prepare and Issue Bid Calls Which Encourage Wide and Accurate Bidder Responses by Clearly Identifying the Items, Their Specifications, and the Desired Bidding Procedure

This objective was rated appropriate by all of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was thirteen. This objective was validated.

Indicator 2.2.5.2.1 as measured by 90 percent of the bids received conforming to the bid call specifications. This indicator was rated appropriate or moderately appropriate by fifteen of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was twelve. This indicator was validated.

Two of the fifteen jurors indicated a level of performance other than the 90 percent level stated in the indicator. Both of those jurors indicated a 95 percent level of performance.

Indicator 2.2.5.2.2 as measured by receipt of bids from 80 percent of the parties deemed eligible by the director of business affairs. This indicator was rated appropriate or moderately appropriate by eleven of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was not validated. Since the indicator was not validated, no analysis was made of the suggested levels of performance.

Objective 2.2.5.3 The Financial Affairs Department Will Present Invoices to the Board of Education For Approval of Payment Within 30 Days After Receipt of Merchandise

This objective was rated appropriate by fourteen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was fourteen. This objective was validated.

Indicator 2.2.5.3.1 equalling no less than 90 percent of the value of the total amount of goods received during that period. This indicator was rated appropriate or moderately appropriate by thirteen of the fourteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon fourteen total responses, was ten. This performance indicator was validated.

Two of the thirteen jurors indicated a level of performance other than the stated 90 percent level. Both of those jurors indicated a 100 percent level of performance.

Objective 2.2.5.4 The Financial Affairs Department Will Pay Bills Indicating Cost Reductions for Prompt Payment

This objective was rated appropriate by all of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.2.5.4.1 through payment within the specified time of all bills indicating cost reduction for prompt payment. This indicator was rated appropriate or moderately appropriate by eighteen of the nineteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon nineteen total responses, was fourteen. This performance indicator was validated.

Three jurors out of the eighteen suggested a level of performance other than the level stated in the objective. Two of those jurors indicated an 80 percent level of performance. The other juror indicated a 95 percent level of performance.

Indicator 2.2.5.4.2 when such payment results in a cost savings at least equal to the cost of processing the payment. This indicator was rated appropriate or moderately appropriate by eleven of the nineteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon nineteen total responses, was fourteen. This performance indicator was not validated. Since the indicator was not validated, no analysis was made of the juror suggestions for levels of performance.

Objective 2.2.6.1 The Financial Affairs Department Will Accurately Inventory All Goods on Hand in the District Warehouse

This objective was rated appropriate by all of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.2.6.1.1 as measured by no inabilities to deliver goods recorded as "in stock" on current inventory list because of inventory inaccuracies. This indicator was rated appropriate or moderately appropriate by seventeen of the nineteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon nineteen total responses, was fourteen. This performance indicator was validated.

Four jurors indicated a level of performance other than the level stated in the indicator. Two jurors indicated a 1 percent level of performance. One juror indicated a 2 percent level of performance. The remaining juror indicated a 5 percent level of performance.

Indicator 2.2.6.1.2 as measured by a discrepancy of no more than 2 percent between the reported volume of a stock item and the actual volume of that item. This indicator was rated appropriate or moderately appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Two jurors indicated a level of performance other than the 3 percent level. One juror suggested a 2 percent level of performance and the other juror indicated that no discrepancy ought to exist.

Objective 2.2.6.2 The Financial Affairs Department Will Maintain Accurate Inventory Records of All District Equipment Holdings

This objective was rated appropriate by all of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.2.6.2.1 as measured by comparing the "record" against a 10 percent sample of equipment holdings within a given district facility and allowing no more than 1 percent discrepancy. This indicator was rated appropriate or moderately appropriate by all of the nineteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon nineteen total responses, was fourteen. This performance indicator was validated. None of the jurors suggested a level of performance other than the level stated in the indicator.

Objective 2.2.6.3 The Financial Affairs Department Will Maintain an Accurate Inventory Record of All District-owned Sites and Facilities Annually

This objective was rated appropriate by sixteen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.2.6.3.1 with no errors. This indicator was rated appropriate or moderately appropriate by fifteen of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon sixteen total responses, was twelve. This performance indicator was validated. None of the jurors suggested a level of performance other than the level stated in the indicator.

Objective 2.2.7.1 The Financial Affairs Department Will Identify and List for the Purpose of Bonding, All School Personnel Who Handle District Monies

This objective was rated appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.2.7.1.1 with no mistakes. This indicator was rated appropriate or moderately appropriate by all of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated. None of the jurors suggested a level of performance other than the level stated in the indicator.

Objective 2.2.8.1 The Financial Affairs Department Will Select Depositories so That

This objective was rated appropriate by thirteen of the fifteen responding jurors. The critical number of appropriate responses needed, based upon a total of fifteen responses, was eleven. This objective was validated.

Indicator 2.2.8.1.1 the depositorie's fixed assets do not exceed 50 percent of capital funds. This indicator was rated appropriate or moderately appropriate by eight of the twelve responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon twelve total responses, was nine. This performance indicator was not validated. Since this indicator was not validated, no analysis was made of the juror suggestions for levels of performance.

Indicator 2.2.8.1.2 each has at least $100,000 in deposits. This indicator was rated appropriate or moderately appropriate by seven of the eleven responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eleven total responses, was eight. This performance indicator was not validated. Since this indicator was not validated, no analysis was made of the juror suggestions for levels of performance.

Objective 2.2.9.1 The Financial Affairs Department Will Maintain an Extra Classroom Fund

This objective was rated appropriate by eight of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was twelve. This objective was not validated. Since the objective was not validated, no analysis was made of the indicator.

JUROR RESPONSES TO THE OBJECTIVE AND PERFORMANCE INDICATOR STATEMENTS FOR THE TRANSPORTATION DEPARTMENT

Ten objectives relating to the transportation department were submitted to the jury for evaluation and comment. Five of those objectives were accompanied by only one performance indicator, three objectives had two performance indicators, and the remaining two objectives had three performance indicators. Juror responses to the objectives and performance indicators were displayed in Table 5. The determination of the critical value necessary for validation was made from Table 1 found on page 22.

Objective 2.3.1.1 The Transportation Department Will Develop a Home-school, School-home Student Transportation System Which Requires the Shortest Number of Total Miles Travelled as Compared with Alternative Systems

This objective was rated appropriate by fourteen of the eighteen responding jurors. The critical number of appropriate responses needed,

Table 5

Juror Responses to the Objective and Performance Indicator Statements
for the Transportation Department

Objectives	Responses		Performance Indicators	Responses	
	A	NA		A or MA	NA
2.3.1.1 The Transportation Department will develop a home-school, school-home student transportation system which requires the shortest number of total miles travelled as compared with alternative systems	14*	4	2.3.1.1.1 as measured by a minimum number of bus miles expended in all routes as opposed to any other organization of routes.	12*	2
			2.3.1.1.2 as measured by a minimum number of student bus miles expended in all routes as opposed to any other organization of routes.	12*	2
2.3.1.2 The Transportation Department will deliver daily all eligible secondary bus students to their designated school	17*	1	2.3.1.2.1 no earlier than 30 minutes before starting time and pick up students no later than 30 minutes after dismissal with 90 percent effectiveness.	15*	2
2.3.1.3 The Transportation Department will deliver daily all eligible elementary bus students to their designated school	17*	0	2.3.1.3.1 no earlier than 15 minutes before starting time and pick up students no later than 5 minutes after dismissal with 90 percent effectiveness.	15*	2
2.3.2.1 The Transportation Department will conduct an effective and accurate monthly mechanic inspection of all district transportation vehicles	17*	2	2.3.2.1.1 as evidenced by the maintenance of an average of no less than 45,000 miles per vehicle fleet breakdown due to failure of inspected components.	15*	1

Table 5 (continued)

Objectives	Responses A	Responses NA	Performance Indicators	Responses A or MA	Responses NA
2.3.2.2 The Transportation Department will employ personnel for vehicle inspections and maintenance which are adequate both in number and skill	18*	1	2.3.2.2.1 as evidenced by the completion of all monthly scheduled bus inspections.	16*	2
			2.3.2.2.2 as evidenced by the certification for operation of no less than 90 percent of the total transportation fleet.	17*	1
2.3.3.1 The Transportation Department will publish clear, understandable, and uncomplicated bus route information at least one week prior to the start of the school year	17*	1	2.3.3.1.1 so that requests for such route information equals less than 5 percent of the student population following the publication of said document.	16*	1
2.3.3.2 The Transportation Department will construct, update, and forward to the Financial Affairs Department five-year long-range plans	17*	1	2.3.3.2.1 two months prior to the initial presentation of the yearly budget to the Board of Education.	17*	0
2.3.3.3 The Transportation Department will construct bus routes for the transportation of all eligible bus students to and from school	19*	0	2.3.3.3.1 with no exceptions.	17*	1
			2.3.3.3.2 which will allow no student to ride on a bus one way for more than 35 minutes.	14*	5

Table 5 (continued)

Objectives	Responses		Performance Indicators	Responses	
	A	NA		A or MA	NA
2.3.4.1 The Transportation Department will conduct an in-service training program for bus drivers designed to (1) achieve driver compliance with district and state vehicle operator policies; (2) decrease bus accidents due to driver error; and (3) reduce patron complaints regarding driver policies and practices	19*	0	2.3.4.1.1 as evidenced by 90 percent of the total number of drivers in the district complying with the vehicle operator policies as enumerated by the district and state agencies.	18*	0
			2.3.4.1.2 as evidenced by the maintenance of no less than 45,000 miles per chargeable bus accident due to driver error.	16*	2
			2.3.4.1.3 as evidenced by valid complaints equaling no more than 1 percent of eligible student bus population.	13*	5
2.3.5.1 The Transportation Department will transport students and faculty members safely, economically and timely on trips scheduled to selected destinations	18*	0	2.3.5.1.1 maintaining an average of no less than 45,000 miles per chargeable accident.	14*	3
			2.3.5.1.2 keeping expenditures within the budgetary limits.	16*	1
			2.3.5.1.3 maintaining a 95 percent accuracy response to requested pick-up and delivery times.	17*	0

*Validated

based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.3.1.1.1 as measured by a minimum number of bus miles expended in all routes as opposed to any other organization of routes. This indicator was rated appropriate or moderately appropriate by twelve of the fourteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon fourteen total responses, was ten. This performance indicator was validated. None of the jurors suggested a level of performance other than the level stated in the indicator.

Indicator 2.3.1.1.2 as measured by a minimum number of student bus miles expended in all routes as opposed to any other organization of routes. This indicator was rated appropriate or moderately appropriate by twelve of the fourteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon fourteen total responses, was ten. This performance indicator was validated. No suggestions were made by the jurors regarding a level of performance other than the level stated in the indicator.

Objective 2.3.1.2 The Transportation Department Will Deliver Daily All Eligible Secondary Bus Students to Their Designated School

This objective was rated appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.3.1.2.1 no earlier than 30 minutes before starting time and pick up students no later than 30 minutes after dismissal with 90 percent effectiveness. This indicator was rated appropriate or moderately appropriate by fifteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated.

Four jurors suggested levels of performance other than the levels of performance stated in the indicator. Two jurors indicated 30 minutes before starting time and 30 minutes after dismissal time with 95 percent effectiveness as the appropriate level of performance. One juror indicated 15 minutes before starting time and 10 minutes after dismissal time with 90 percent effectiveness as the appropriate level of performance. The remaining juror suggested 15 minutes before starting time and 15 minutes after dismissal time with 90 percent effectiveness as the appropriate level of performance.

Objective 2.3.1.3 The Transportation Department Will Deliver Daily All Eligible Elementary Bus Students to Their Designated School

This objective was rated appropriate by all of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was twelve. This objective was validated.

Indicator 2.3.1.3.1 no earlier than 15 minutes before starting time and pick up students no later than 5 minutes after dismissal with 90 percent effectiveness. This indicator was rated appropriate or moderately appropriate by fifteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Six jurors suggested levels of performance other than the levels stated in the indicator. The juror suggestions were as follows: (1) 30 minutes before and 10 minutes after with 90 percent effectiveness; (2) 30 minutes before and 20 minutes after with 90 percent effectiveness; (3) 15 minutes before and 15 minutes after with 95 percent effectiveness; and (4) 15 minutes before and 5 minutes after with 95 percent effectiveness. The remaining two jurors indicated a change in only one of the performance levels. One juror suggested 100 percent effectiveness and the other juror suggested a pick-up time 15 minutes after dismissal.

Objective 2.3.2.1 The Transportation Department Will Conduct an Effective and Accurate Monthly Mechanic Inspection of all District Transportation Vehicles

This objective was rated appropriate by seventeen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.3.2.1.1 as evidenced by the maintenance of an average of no less than 45,000 miles per vehicle fleet breakdown due to failure of inspected components. This indicator was rated appropriate or moderately appropriate by fifteen of the sixteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon sixteen total responses, was twelve. This performance indicator was validated.

Two jurors suggested a level of performance other than the 45,000 mile level stated in the indicator. One juror suggested 30,000 miles, and the other juror suggested 5,000 miles.

Objective 2.3.2.2 The Transportation Department Will Employ Personnel For Vehicle Inspections and Maintenance Which are Adequate Both in Number and Skill

This objective was rated appropriate by eighteen of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.3.2.2.1 as evidenced by the completion of all monthly scheduled bus inspections. This indicator was rated appropriate or moderately appropriate by sixteen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was validated. No juror made a suggestion for a level of performance other than the level stated in the indicator.

Indicator 2.3.2.2.2 as evidenced by the certification for operation of no less than 90 percent of the total transportation fleet. This indicator was rated appropriate or moderately appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Five jurors indicated a level of performance other than the 90 percent level stated. One juror indicated a range of from 80-95 percent, two jurors indicated 95 percent, one juror indicated 98 percent, and one juror indicated 100 percent.

Objective 2.3.3.1 The Transportation Department Will Publish Clear, Understandable, and Uncomplicated Bus Route Information at Least One Week Prior to the Start of the School Year

This objective was rated appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.3.3.1.1 so that requests for such route information equals less than 5 percent of the student population following the publication of said document. This indicator was rated appropriate or moderately appropriate by sixteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

One juror suggested a level of performance other than that stated in the indicator. A 10 percent level of performance was suggested by that juror.

Objective 2.3.3.2 The Transportation Department Will Construct, Update, and Forward to the Financial Affairs Department Five-year Long-range Plans

This objective was rated appropriate by seventeen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.3.3.2.1 two months prior to the initial presentation of the yearly budget to the board of education. This indicator was rated appropriate or moderately appropriate by all of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

Three jurors suggested a level of performance other than the 2 months level suggested in the indicator. Two of those jurors suggested a 3 months level and one juror suggested a 1 month level.

Objective 2.3.3.3 The Transportation Department Will Construct Bus Routes for the Transportation of all Eligible Bus Students to and from School

This objective was rated appropriate by all of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.3.3.3.1 with no exceptions. This indicator was rated appropriate or moderately appropriate by seventeen of eighteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Four jurors indicated a level of performance other than that stated in the indicator. Two jurors suggested a 5 percent level of performance and the other two jurors suggested a 1 percent level of performance.

Indicator 2.3.3.3.2 which will allow no student to ride on a bus one way for more than 35 minutes. This indicator was rated appropriate or moderately appropriate by fourteen of the nineteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon nineteen total responses, was fourteen. This performance indicator was validated.

Four jurors suggested a level of performance other than the 35 minute level stated in the indicator. Two of the jurors suggested a 60 minute level of performance, one juror suggested a 30 minute level of performance, and one juror suggested a range of 35-45 minutes as an appropriate level of performance.

Objective 2.3.4.1 The Transportation Department Will Conduct an Inservice Training Program for Bus Drivers Designed to (1) Achieve Driver Compliance with District and State Vehicle Operator Policies; (2) Decrease Bus Accidents Due to Driver Error; and (3) Reduce Patron Complaints Regarding Driver Policies and Practices

This objective was rated appropriate by all of the nineteen responding jurors. The critical number of appropriate responses needed, based upon a total of nineteen responses, was fourteen. This objective was validated.

Indicator 2.3.4.1.1 as evidenced by 90 percent of the total number of drivers in the district complying with the vehicle operator policies as enumerated by the district and state agencies. This indicator was rated appropriate or moderately appropriate by all of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Ten of the eighteen jurors suggested a level of performance other than the 90 percent level stated in the indicator. Three jurors suggested a 95 percent level of performance, and the remaining seven jurors suggested a 100 percent level of performance.

Indicator 2.3.4.1.2 as evidenced by the maintenance of no less than 45,000 miles per chargeable bus accident due to driver error. This indicator was rated appropriate or moderately appropriate by sixteen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon eighteen total responses, was thirteen. This performance indicator was validated.

Three jurors suggested a level of performance other than the stated 45,000 miles. Two jurors suggested 60,000 miles, and the third juror suggested 90,000 miles.

Indicator 2.3.4.1.3 as evidenced by valid complaints equalling no more than 1 percent of eligible student bus population. This indicator was rated appropriate or moderately appropriate by thirteen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon eighteen total responses, was thirteen. This performance indicator was validated. No jurors suggested a level of performance other than that stated in the indicator.

Objective 2.3.5.1 The Transportation Department Will Transport Student and Faculty Members Safely, Economically and Timely on Trips Scheduled to Selected Destinations

This objective was rated appropriate by all of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.3.5.1.1 maintaining an average of no less than 45,000 miles per chargeable accident. This indicator was rated appropriate or moderately appropriate by fourteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated.

One juror indicated a level of performance other than that level stated in the indicator. That juror suggested 90,000 miles as an appropriate level of performance.

Indicator 2.3.5.1.2 keeping expenditures within the budgetary limits. This indicator was rated appropriate or moderately appropriate by sixteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated.

One juror suggested a level of performance other than that stated in the indicator. That juror suggested a 3 percent level of variation above budgetary limits as an appropriate level of performance.

Indicator 2.3.5.1.3 maintaining a 95 percent accuracy response to requested pick-up and delivery times. This indicator was rated appropriate or moderately appropriate by all of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated.

Two jurors suggested a level of performance other than the level stated in the indicator. One juror suggested 98 percent, and one juror suggested 99 percent as the appropriate level of performance.

JUROR RESPONSES TO THE OBJECTIVE AND PERFORMANCE INDICATOR STATEMENTS FOR THE FOOD SERVICES DEPARTMENT

Seven objectives relating to the food services department were submitted to the jury for evaluation and comment. Six of those objectives had one performance indicator, and one objective had two performance indicators. Juror responses to the objectives and performance indicators were displayed in Table 6. The determination of the critical value necessary for validation was made from Table 1 on page 22.

Objective 2.4.1.1 The Food Services Department Will Continuously Operate All Cafeterias in Compliance With All District, State, and Federal Health Regulations

This objective was rated appropriate by all of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.4.1.1.1 as measured by no more than one irregularity cited in the monthly health inspections conducted by the state or local agency. This indicator was rated appropriate or moderately appropriate by fifteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated. No juror suggested a level of performance other than the level stated in the indicator.

Table 6

Juror Responses for the Objective and Performance Indicator Statements
for the Food Services Department

Objective	Responses: A	Responses: NA	Performance Indicators	Responses: A or MA	Responses: NA
2.4.1.1 The Food Services Department will continuously operate all cafeterias in compliance with all district, state, and federal health regulations	18*	0	2.4.1.1.1 as measured by no more than one irregularity cited in the monthly health inspections conducted by the state or local agency.	15*	2
2.4.1.2 The Food Services Department will serve palatable type "A" lunches taking into consideration student taste preference	18*	0	2.4.1.2.1 with no more than 10 percent of the eatable weight of the lunch returned uneaten.	15*	3
2.4.1.3 The Food Services Department will operate the cafeterias so that the number of participants in the lunch program will increase yearly	10	7	2.4.1.3.1 by at least 5 percent.	-	-
2.4.1.4 The School Lunch Department will construct, update, and forward to the Financial Affairs' Department a five-year plan of identifying major equipment needs on a year-by-year schedule	17*	0	2.4.1.4.1 two months prior to the initial presentation of the yearly budget to the Board of Education.	17*	0

Table 6 (continued)

Objective	Responses		Performance Indicators	Responses	
	A	NA		A or MA	NA
2.4.2.1 The Food Service Department will purchase food supplies in advance	14*	3	2.4.2.1.1 so that no scheduled menu will be unable to be prepared.	12*	2
2.4.3.1 The Food Services Department will serve low cost type "A" lunches	16*	2	2.4.3.1.1 with a food cost per lunch of at least 55 percent of the sale price.	13*	2
2.4.4.1 The Food Services Department will plan menus that meet the legal nutritional requirements and take into account student preference of taste	17*	0	2.4.4.1.1 as measured by no discrepancies from the established nutritional requirements as identified by the federal agency.	16*	1
			2.4.4.1.2 as measured by no more than 10 percent of the eatable weight returned uneaten.	13*	4

*Validated

Objective 2.4.1.2 The Food Services Department Will Serve Palatable Type "A" Lunches Taking Into Consideration Student Taste Preference

The objective was rated appropriate by all of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.4.1.2.1 with no more than 10 percent of the eatable weight of the lunch returned uneaten. This indicator was rated appropriate or moderately appropriate by fifteen of the eighteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon eighteen total responses, was thirteen. This performance indicator was validated.

One juror suggested a level of performance other than the 10 percent level stated in the indicator. That juror suggested a 2 percent level.

Objective 2.4.1.3 The Food Services Department Will Operate the Cafeterias so that the Number of Participants in the Lunch Program Will Increase Yearly

This objective was rated appropriate by ten of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was twelve. This objective was not validated. Since the objective was not validated, no analysis was made of the performance indicator.

Objective 2.4.1.4 The Food Services Department Will Construct, Update, and Forward to the Financial Affairs Department a Five-Year Plan of Identifying Major Equipment Needs on a Year-By-Year Schedule

This objective was rated appropriate by all of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was twelve. This objective was validated.

Indicator 2.4.1.4.1 two months prior to the initial presentation of the yearly budget to the board of education. This indicator was rated appropriate or moderately appropriate by all of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated.

Two jurors suggested a level of performance other than the level stated in the indicator. They suggested three months and one month as appropriate levels of performance.

Objective 2.4.2.1 The Food Services Department Will Purchase Food Supplies in Advance

This objective was rated appropriate by fourteen of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was twelve. This objective was validated.

Indicator 2.4.2.1.1 so that no scheduled menu will be unable to be prepared. This indicator was rated appropriate or moderately appropriate by twelve of the fourteen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon fourteen total responses, was ten. This performance indicator was validated.

Two jurors indicated a level of performance other than that stated in the indicator. One juror suggested that 5 percent would be an appropriate level of performance. The other juror indicated that five menus per school year would be an appropriate level of performance.

Objective 2.4.3.1 The Food Services Department Will Serve Low Cost Type "A" Lunches

This objective was rated appropriate by sixteen of the eighteen responding jurors. The critical number of appropriate responses needed, based upon a total of eighteen responses, was thirteen. This objective was validated.

Indicator 2.4.3.1.1 with a food cost per lunch of at least 55 percent of the sale price. This indicator was rated appropriate or moderately appropriate by thirteen of the fifteen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon fifteen total responses, was eleven. This performance indicator was validated.

One juror indicated a level of performance other than that stated in the indicator. That juror suggested a 60 percent level of performance.

Objective 2.4.4.1 The Food Services Department Will Plan Menus That Meet the Legal Nutritional Requirements and Take Into Account Student Preference of Taste

This objective was rated appropriate by all of the seventeen responding jurors. The critical number of appropriate responses needed, based upon a total of seventeen responses, was twelve. This objective was validated.

Indicator 2.4.4.1.1 as measured by no discrepancies from the established nutritional requirements as identified by the federal agency. This indicator was rated appropriate or moderately appropriate by sixteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses necessary, based upon seventeen total responses, was twelve. This performance indicator was validated.

One juror suggested a level of performance other than that stated in the indicator. The juror suggested a discrepancy of no more than 2 percent would be an appropriate level of performance.

Indicator 2.4.4.1.2 as measured by no more than 10 percent of the eatable weight returned uneaten. This indicator was rated appropriate or moderately appropriate by thirteen of the seventeen responding jurors. The critical number of appropriate or moderately appropriate responses needed, based upon seventeen total responses, was twelve. This performance indicator was validated.

One juror suggested a level of performance other than that stated in the indicator. That juror suggested 2 percent as an appropriate level of performance.

CONCLUSIONS

Conclusions regarding the development of exemplary objectives and performance indicators were drawn from the ratings, suggestions, and comments made by the jurors on the rating instrument. Validated objectives were concluded to be exemplary as stated unless modified in light of juror comments. In similar fashion, validated performance indicators were concluded to be exemplary as stated unless modified in light of juror suggestions and comments.

The conclusions drawn were presented in the form of objectives and accompanying performance indicators. The objectives and performance indicators were presented according to the five established organizational units: (1) the business services division, (2) the buildings and grounds department, (3) the financial affairs department, (4) the transportation department, and (5) the food services department.

Business services division. The following validated objectives and performance indicators were concluded to be exemplary for the business services division:

1. The business services division will provide effective monitoring of all subordinate department's program efforts as measured by the achievement of not less than 80 percent of each department's total objectives.

2. The business services division will employ modern management techniques through the generation and maintenance of multi-year long-range program and cost plans for all subordinate departments.

3. The business services division will employ management techniques through the use of exception reporting

   a. by all subordinate departments.

   b. for any reports having a division greater than the established variance agreed upon by the division and respective department program directors.

4. The business services division will employ modern management techniques through the use of management by objectives techniques with all subordinate departments.

Buildings and grounds department. The following validated objectives and performance indicators were concluded to be exemplary for the buildings and grounds department.

1. The buildings and grounds department will perform activities concerned with keeping the district's facilities open as measured by no building being closed down by any legal agency due to the lack of maintenance of proper standards.

2. The buildings and grounds department will perform the district designated daily, weekly, monthly, etc., housekeeping activities as determined by obtaining a 98 percent accomplishment rating on the pre-established district inspection check-list when applied by the facilities chief administrator or the buildings and grounds supervisor.

3. The buildings and grounds department will respond promptly to authorized requests for either regular maintenance or repair of district grounds, buildings, and equipment, or for emergency repair of same

a. as measured by a time lag of no more than ten days between the receipt of an approved request for regular maintenance or repair and the initiation of work on that repair.

b. as measured by a time lag of no more than four hours between the notification of an emergency repair need and the initiation of work on that repair.

4. The buildings and grounds department will develop a five year program outlining year-by-year major maintenance projects such as roof repair, painting, boiler replacement, flooring, etc. to be completed two months prior to the initial presentation of the proposed district budget to the board of education.

5. The buildings and grounds department will produce and yearly update a plan for the orderly replacement of major equipment

a. to be completed two months prior to the initial presentation of the district financial budget to the board of education.

b. which will display at least 95 percent of the estimated costs needed for new equipment in future years.

Financial affairs department. The following objectives with their attendant performance indicators were concluded to be exemplary for the financial affairs department.

1. Each department head shall submit in correct form requests for expenditures for inclusion into the annual budget after receipt of comprehensive instructions from the financial affairs department

a. as measured by 95-100 percent of all operating and capital outlay request turned in correct form.

b. as measured by requests for explanation of budget preparation procedures equaling no more than 10 percent of the total amount of district personnel responsible for operating and capital outlay requests.

2. The financial affairs department will prepare the annual school district budget in compliance with all state regulations and directives so that no exceptions are made by state agencies to the completed budget.

3. The financial affairs department will publish the integrated long-range plans of the business services division

a. one month prior to the initial presentation of the yearly budget to the board of education.

b. which will represent the plans of at least 95 percent of the divisions' departments.

4. The financial affairs department will accurately project school district income and expenditures

a. for at least five years in advance.

b. with less than 2 percent discrepancy between the most recent current year projected expenditures and income, and the actual expenditures and income.

5. The financial affairs department will accurately account for all the financial transactions entered into by the school district monthly

a. as measured by a fiscal report submitted to the board of education for inclusion into the board minutes representing at least 95 percent of all the transactions that occurred.

b. as measured by the receipt of yearly positive external audit report.

6. The financial affairs department will produce and distribute accurate W-2 income tax forms on or before January 31

a. with no late deliveries.

b. with less than 1 percent employee dissatisfaction as measured by valid employee complaints.

7. The financial affairs department will record promptly and accurately all salaries paid to district employees

a. within one week after production of a given payroll.

b. with no errors.

8. The financial affairs department will promptly record and file all official district-wide financial documents within two days after receipt of a given document.

9. The financial affairs department will produce and distribute accurate paychecks to all employees according to the pre-determined published time schedule

a. with no late deliveries.

b. with less than 1 percent employee dissatisfaction as measured by valid employee complaints.

10. The financial affairs department will promptly and accurately prepare and distribute all district approved purchase orders

a. with a time lag of no more than three days from the time of receipt of final approval to write the purchase order and transmission of said order from the district to the intended recipient.

b. with no more than 1 percent error in the purchase order preparation process.

11. The financial affairs department will prepare and issue bid calls which encourage wide and accurate bidder response by clearly identifying the items, their specifications, and the desired bidding procedure as measured by 90 percent of the bids received conforming to the bid call specifications.

12. The financial affairs department will present invoices to the board of education for approval of payment within 30 days after receipt of merchandise equaling no less than 90 percent of the value at the total amount of goods received during that period.

13. The financial affairs department will pay bills indicating cost reductions for prompt payment through payment within the specified time of all bills indicating cost reduction for prompt payment.

14. The financial affairs department will accurately inventory all goods on hand in the district warehouse

a. as measured by no inabilities to deliver goods recorded as "in stock" on current inventory list because of inventory inaccuracies.

b. as measured by a discrepancy of no more than 3 percent between the reported volume of a stock item and the actual volume of that item.

15. The financial affairs department will maintain accurate inventory records of all district equipment holdings as measured by

comparing the "record" against a 10 percent sample of equipment holdings within a given district facility and allowing no more than a 1 percent discrepancy.

16. The financial affairs department will maintain an accurate inventory record of all district-owned sites and facilities annually with no errors.

17. The financial affairs department will identify and list for the purpose of bonding, all school personnel who handle district monies with no mistakes.

Transportation department. The following objectives with their attendant performance indicators were concluded to be exemplary for the transportation department.

1. The transportation department will develop a home-school, school-home student transportation system which requires the shortest number of total miles travelled as compared with alternative systems

a. as measured by a minimum number of bus miles expended in all routes as opposed to any other organization of routes.

b. as measured by a minimum number of student bus miles expended in all routes as opposed to any other organization of routes.

2. The transportation department will deliver daily all eligible secondary bus students to their designated school no earlier than 30 minutes before starting time and pick up students no later than 30 minutes after dismissal with 90 percent effectiveness.

3. The transportation department will deliver daily all eligible elementary bus students to their designated school no earlier than 15 minutes before starting time and pick up students no later than 5 minutes after dismissal with 90 percent effectiveness.

4. The transportation department will conduct an effective and accurate monthly mechanic inspection of all district transportation vehicles as evidenced by the maintenance of an average of no less than 45,000 miles per vehicle fleet breakdown due to failure of inspected components.

5. The transportation department will employ personnel for vehicle inspections and maintenance which are adequate both in number and skill

a. as evidenced by the completion of all monthly scheduled bus inspections.

b. as evidenced by the certification for operation of no less than 90 percent of the total transportation fleet.

6. The transportation department will publish clear, understandable, and uncomplicated bus route information at least one week prior to the start of the school year so that requests for such route information equals less than 5 percent of the student population following the publication of said document.

7. The transportation department will construct, update, and forward to the financial affairs department five-year long-range plans two months prior to the initial presentation of the yearly budget to the board of education.

8. The transportation department will construct bus routes for the transportation of all eligible bus students to and from school

a. with no exceptions.

b. which will allow no student to ride on a bus one way for more than thirty-five minutes in absence of a stated board policy.

9. The transportation department will conduct an inservice training program for bus drivers designed to (1) achieve driver compliance with district and state vehicle operator policies; (2) decrease bus accidents due to driver error; and (3) reduce patron complaints regarding driver policies and practices

a. as evidenced by 90 percent of the total number of drivers in the district complying with the vehicle operator policies as enumerated by the district and state agencies.

b. as evidenced by the maintenance of no less than 45,000 miles per chargeable bus accident due to driver error.

c. as evidenced by valid complaints equaling no more than 1 percent of eligible student bus population.

10. The transportation department will transport students and faculty members safely, economically and timely on trips scheduled to selected destinations

a. maintaining an average of no less than 45,000 miles per chargeable accident.

b. keeping expenditures within the budgetary limits.

c. maintaining a 95 percent accuracy response to requested pickup and delivery times.

Food services department. The following objectives with their attendant performance indicators were concluded to be exemplary for the food services department.

1. The food services department will continuously operate all cafeterias in compliance with all district, state, and federal health

regulations as measured by no more than one irregularity cited in the monthly health inspections conducted by the state or local agency.

2. The food services department will serve palatable type "A" lunches taking into consideration student taste preference with no more than 10 percent of the eatable weight of the lunch returned uneaten.

3. The food services department will construct, update, and forward to the financial affairs department a five-year plan of identifying major equipment needs on a year-by-year schedule two months prior to the initial presentation of the yearly budget to the board of education.

4. The food services department will purchase food supplies in advance so that no scheduled menu will be unable to be prepared.

5. The food services department will serve low cost type "A" lunches with a food cost per lunch of at least 55 percent of the sale price.

6. The food services department will plan menus that meet the legal nutritional requirements and take into account student preference of taste

   a. as measured by no discrepancies from the established nutritional requirements as identified by the federal agency.

   b. as measured by no more than 10 percent of the eatable weight returned uneaten.

DISCUSSION

The development of the model indicating the writing style for objectives for the business area plus numerous objectives validated by the jury can serve as the necessary example for school districts entering into PPBS. In implementing a PPB system many districts encounter a dilemma determining the proper sequencing of activities.

One school of thought advocates the generation of objectives from school district goals which have been discerned from previously identified societal goals. The tedious slowness of this technique is its main disadvantage. Its main advantage is the rational and logical method of objective development assuring the compatability of objectives to goals.

Another school of thought favors the grassroot approach to the problem. The pyramiding of objectives related to the ascending levels of the organization eventually develops the organization's goals. The immediacy of results at low organizational levels is this approach's main asset. The approach suffers from the same slowness that characterized the first approach.

This researcher is of the opinion that the approaches are not mutually exclusive. The systems approach with its recycling aspect infers continual updating and modification. This concept in association with negotiation techniques presently being expanded into education hold the promise for early entrances into the PPB system cycle at multiple entrance levels within the organizational hierarchy. Negotiation to establish goal and objective congruency and compatability then becomes the normal mode of operation.

The objectives developed in this study were aimed at the upper levels of the hierarchy. Individual districts need to develop lower level objectives, merge the varing unit objectives, and establish an organizational objective hierarchy prior to the implementation of an operational PPB system.

REFERENCES

A. BOOKS

Alkin, Marvin C. and James E. Bruno. "Systems Approaches to Educational Planning," Social and Technological Change: Implications for Education. Eugene: University of Oregon Press, 1970.

Armstrong, Robert J. and others (eds.). Developing and Writing Behavioral Objectives. Tuscon: Educational Innovators Press, 1970.

Grondlund, Norman E. Stating Behavioral Objectives for Classroom Instruction. London: The Macmillan Company, 1970.

Hartley, Harry J. Educational Planning-Programming-Budgeting: A Systems Approach. Englewood Cliffs: Prentice-Hall, Inc., 1968.

Hill, Frederick W. and James W. Colmey. School Business Administration in the Smaller Community. Minneapolis: T.S. Denison & Company, Inc., 1964.

Kibler, Robert J., Larry L. Barker, and David T. Miles. Behavioral Objectives and Instruction. Boston: Allyn and Bacon, Inc., 1970.

Lindvall, C. M. (ed.). Defining Educational Objectives. Pittsburgh: University of Pittsburgh Press, 1964.

Mager, Robert F. Preparing Instructional Objectives. Palo Alto: Fearon Publishers, 1962.

Odiorne, George S. Management by Objectives. New York: Pitman Publishing Corporation, 1965.

Schick, Allen. "The Road to PPB: The Stages of Budget Reform." Planning Programming Budgeting: A Systems Approach to Management, Lyden, Fremont J. and Earnest G. Miller (eds.). Chicago: Markham Publishing Company, 1967.

Smithies, Arthur. The Budgetary Process in the United States. New York: McGraw-Hill Publishers, 1955.

Tyler, Ralph W. Constructing Achievement Tests. Columbus, Ohio: Bureau of Educational Research, Ohio State University, 1934.

B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES, AND OTHER ORGANIZATIONS

Brissey, F. L., F. R. Fosmire, and R. J. Hill. Technology Report: Problems, Problem-Solving and Human Communication. A Laboratory Approach to Training in Interpersonal Communication. Eugene, University of Oregon: Center for the Advanced Study of Educational Administration, 1969.

Eidell, Terry L. and John M. Nagle. PPBS and Data-Based Educational Planning. Eugene, University of Oregon: Center for the Advanced Study of Educational Administration, 1970.

Hill, Frederick W. "The Relationship of the School Business Operation to Other Areas of the Educational Organization." The School Business Administrator, Bulletin No. 21, 1970.

Kiser, Chester and others (ed.). An Operational Model for the Application of Planning-Programming-Budgeting Systems in Local School Districts. Williamsville, New York: The Western New York School Development Council, 1970.

Miller, Donald R. and others. A Manager's Guide to Objectives. San Mateo: Operation PEP, A state-wide project to prepare educational planners for California, October, 1969.

Mushkin, Selma J. "PPB Note 7: Output Measures for a Multi-Year Program and Financial Plan." Washington: The George Washington University, 1967.

Mushkin, Selma and James R. Cleaveland. "Planning for Educational Development in a Planning, Programming, Budgeting System," Proceedings of the Eleventh National Conference on School Finance. Dallas, 1968.

Stemnock, Suzanne K. Structuring the Administrative Organization of Local School Systems. Circulars of the Educational Research Service, No. 2. Washington D.C.: American Association of School Administrators and National Education Association Research Division, 1970.

C. PERIODICALS

Chambers, George A. "PPBS-New Challenges and Opportunities for the Principal in Management." North Central Association Quarterly, Spring, 1968.

Shands, Richard E. "Position and Status of School Business Administrator." School Business Affairs. November, 1970.

D. UNPUBLISHED MATERIALS

Baker, Eva Lee. "The Differential Effect of Behavioral and Non-behavioral Objectives Given to Teachers on the Achievement of their Students." Unpublished Doctor's dissertation, University of California, Los Angeles, 1967.

Dyer, Henry S. "The Concept and Utility of Educational Performance Indicators." Paper presented at the Systems Science and Cybernetics Conference. Boston: Massachusetts, October, 1967. (Mimeographed)

Neal, Philip A. "The Value of Including Detailed and Carefully Defined Specific Objectives in the Instructor Guides Used in the United States Air Force Reserve Training Program." Unpublished Doctor's dissertation, University of Pittsburgh, 1959.

74/75

BIBLIOGRAPHY

A. BOOKS

Ayres, Leonard P. School Organization and Administration. New York: Russell Sage Foundation, 1916.

Burkhead, Jesse. Government Budgeting. New York: John Wiley and Sons, Inc., 1956.

Corbally, John E. Jr. School Finance. Boston: Allyn and Bacon, Inc., 1962.

Hill, Frederick W. The School Business Administrator. Chicago: Research Corporation of the Association of School Business Officials, 1970.

Jarvis, Oscar T., Harold W. Gentry, and Lester D. Stephens. Public School Business Administration and Finance. West Nyack, New York: Parker Publishing Company, Inc., 1967.

Johns, Roe L. and Edgar L. Morphet. The Economics and Financing of Education: A Systems Approach. Englewood Cliffs: Prentice-Hall, Inc., 1969.

Knezevich, Steven J. Administration of Public Education. 2d ed. New York: Harper and Row, 1962.

Linn, Harry H. (ed.). School Business Administration. New York: The Ronald Press Company, 1956.

Profiles of the Administrative Team. Washington D.C.: American Association of School Administrators, 1971.

Smith, Harry P. Business Administration of Public Schools. New York: World Book Company, 1929.

B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES, AND OTHER ORGANIZATIONS

Dade County Public Schools and the Research Corporation of the Association of School Business Officials. "Proposal for Developing Program-Planning-Budgeting-Evaluation System Design." A Proposal for research and related activities submitted to the Office of Education.

Dave, Dr. R. H. National Institute of Education, NIE Building Nehrauli Road, New Delhi, India, cited by Armstrong, Robert J. and others (eds.). *Developing and Writing Behavioral Objectives*.

Education-Planning-Programming-Budgeting System: Procedures Manual for School District, Version 1, Model 2. Philadelphia: Government Studies Center of Fels Institute of Local and State Government, University of Pennsylvania, 1969.

Eidell, Terry L. and John M. Nagle. *Program Planning Document for Data-Based Educational Planning Systems*. Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1970.

Engelhardt, N. L. and Fred Engelhardt. *Survey Manual for the Business Administration in Public School Systems*. New York: Columbia University, 1936.

Executive Office of the President. *Programming-Budgeting*, Bulletin 66-3. Washington, D.C.: Bureau of the Budget, October 12, 1965.

Finigen, Thomas E. and others. *Report of the Survey of the Public Schools of Philadelphia*. Philadelphia: Public Education and Child Labor Association, 1922.

Foster, Charles W. (ed.). *Report of the First National Conference on PPBES in Education*. Chicago: Research Corporation of the Association of School Business Officials, 1969.

General Design for an Education Planning-Programming-Budgeting System. Philadelphia: Government Studies Center, Fels Institute of Local and State Government, University of Pennsylvania, 1968.

Greer, E. A. *Planning-Programming-Budgeting System for the Business and Finance Division*. Las Vegas: Clark County School District, 1970.

A Guide to School Business Services. San Diego: Office of the Superintendent, San Diego County Public Schools, 1956.

Hoffonberg, Marvin. "Program Budgeting in Education: Some Organization Implication." *Proceedings of the Annual Conference on the Economics of Education*. Florida State University, 1969.

Novick, David. *Origin and History of Program Budgeting*. Santa Monica: The RAND Corporation, 1966.

Ponti, Irene Y. *A Guide for Financing School Food and Nutrition Services*. Denver: American School Food Service Association, 1970.

Procedures of the National Education Association, 1883. Washington: National Education Association.

Reason, Paul L. and Alpheus L. White (ed.). *Financial Accounting for Local and State School Systems: Standard Receipt and Expenditure Accounts.* State Educational Records and Reports Series: Handbook II, Bulletin 1957, No. 4. Washington: United States Government Printing Office, 1957.

U. S. Congress. House. Document Number 854, 62d Congress, 2d session.

U. S. Congress. House. Document Number 458, 62d Congress, 2d session.

C. PERIODICALS

Doherty, Victor. "Goals and Objectives in PPBS." Portland: Council of The Great City Schools, 1969.

Dorsey, John W. "Planning-Programming-Budgeting (PPB)," NEA Research Bulletin, 47:95, October, 1969.

Gorham, William. "Notes of a Practitioner." *The Public Interest*. No. 8 1967.

Lopez, Felix W. "Accountability in Education." *Phi Delta Kappan*. December, 1970.

D. UNPUBLISHED MATERIALS

Adalegbe, Adeniji. "An Economic Model for the Planning and Analysis of Public School Expenditures in Western Nigeria: The Program Budget Process." Unpublished Doctor's dissertation, New York University, 1968.

Bethke, Paul G. "Equitable Distribution of State Funds for Pupil Transportation in Colorado." Unpublished Doctor's dissertation, University of Denver, 1965.

Boulden, Alfred W. "The Development of Desirable School Lunch Accounting Procedures." Unpublished Doctor's dissertation, The University of Connecticut, 1964.

Brainard, David. "A Critical Analysis of Public School Building Standards." Unpublished Doctor's dissertation, University of Denver, 1954.

Campo, Anthony. "The Development of Objectives and Criteria for the Evaluation of Classification and Coding Systems of Financial Accounts Designed for Use in Public Schools." Unpublished Doctor's dissertation, State University of New York at Albany, 1964.

Coleman, Ralph E. "A Proposed Performance Formula for the Reimbursement of the School Districts of Pennsylvania for Public School Transportation." Unpublished Doctor's dissertation, Pennsylvania State University, 1961.

00 89

Crum, Lewis R. "The Development of a Method of Interrelating Selected Activities of a Uniform School Accounting System Utilizing Punch Card Accounting Procedures and a Demonstration of the Method in the Area of Child Accounting." Unpublished Doctor's dissertation, University of Denver, 1957.

Cunningham, Roger J. "A Computer Program for Use in Scheduling School Bus Routes." Unpublished Doctor's dissertation, Colorado State College, 1966.

Estes, Everett E. "High School Lunch Programs--A Model for Decision Analysis." Unpublished Doctor's dissertation, Colorado State College, 1968.

Farney, Thomas N. "An Inquiry Into the Responsibilities Which Affect the Educational Opportunities of the School Lunch Program." Unpublished Doctor's dissertation, University of Denver, 1957.

Fritz, John A. "An Analysis of Process for Planning Elementary School Buildings." Unpublished Doctor's dissertation, University of Denver, 1955.

Gott, John. Chapter 3 of a soon to be published article by the Resource Corporation of the Association of School Business Officials manual on PPBES.

Hardin, Claude E. "Guidelines for Cooperative Purchasing Procedures for Public School Districts in the United States." Unpublished Doctor's dissertation, University of Denver, 1969.

Knezevich, Steven J. "Administrative Technology and the School Executive." A report submitted by the AASA Commission on Administrative Technology, Washington, 1969.

Knezevich, Steven J. "Probing the Planning and Programming Dimensions of PPBS." Paper presented at the AASA clinic on Program Budgeting (PPBS), a Resource Allocation Decision System for Education, at Miami, Florida, December 1-5, 1969.

Lamb, Heber B. "A Study of Certain Aspects of the Proposed Nevada Plan for Distribution of State Aid to School Districts." Unpublished Doctor's dissertation, Brigham Young University, 1966.

Loats, Norman R. "A Critical Analysis of Management Practices in the Operation and Maintenance of the Public School Plant." Unpublished Doctor's dissertation, University of Denver, 1953.

Mueller, Edgar H. "The Practicality of Stated Philosophies and Educational Objectives Held by Selected School Districts in Missouri." Unpublished Doctor's dissertation, University of Missouri, 1963.

Paynter, David H. "An Analysis of Selected Business and Financial Problems in Unified School Districts Following Unification." Unpublished Doctor's dissertation, University of Southern California, 1961.

Peat, Marwich, Mitchell and Company. "PPBS Overview." A presentation made by the accountant firm. Denver, Colorado, 1970.

Radloff, John P. "Public School Pupil Transportation: The Legal Implications of Two Issues." Unpublished Doctor's dissertation, University of Denver, 1969.

Ryan, Bernard D. "Theory and Practice in Planning Colorado Public School Buildings." Unpublished Doctor's dissertation, University of Denver, 1965.

Sheathelm, Herbert H. "A Study of the School--Plant Planning Process in Selected Michigan Public School Districts." Unpublished Doctor's dissertation, Michigan State University of Agriculture and Applied Science, 1966.

Tanner, Charles K. "An Automated Simulation Vehicle for School Business Administration Accentuating Computerized Selective School Lunch Menu Planning." Unpublished Doctor's dissertation, The Florida State University, 1968.

Taylor, Burtis E. "A Proposed Pupil Transportation Program for the State of Colorado." Unpublished Doctor's dissertation, University of Denver, 1951.

Terjeson, Thomas. "An Analysis of School Plant Planning in Selected Districts in Washington and Certain Other States." Unpublished Doctor's dissertation, University of Washington, 1963.

Thompson, Leland A. "Criteria for Centralized Warehousing Procedures in Public School Districts." Unpublished Doctor's dissertation, University of Denver, 1969.

Thompson, William A. Jr. "The Use of Boyer's 'Sequential Steps' for Routing School Busses." Unpublished Doctor's dissertation, University of Mississippi, 1963.

Trazy, George S. "A Quantative Approach to the Design of School Bus Routes." Paper presented at the 1970 Annual Meeting of the American Educational Research Association, Minneapolis, Minnesota.

Wenbourne, Earle E. "Pupil Control Factors to be Considered in Planning School Plants for the Grossmont (California) Union High School District." Unpublished Doctor's dissertation, University of Nebraska, 1962.

APPENDIX A

PILOT JURY

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APPENDIX B

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*	Suggested by four experts
+	Accepted jury membership
++	Completed questionnaire

APPENDIX C

OBJECTIVE AND PERFORMANCE INDICATOR NUMBERING SYSTEM

The ordering of the objectives and performance indicators was accomplished through the numbering of the organizational entities of a hypothetical school district. Figures 3, 4, and 5 detail the hypothetical organization. Figure 5 details the many duties commonly carried out by school officials. As can be observed on Figure 5, an objective related to the business service division, buildings and grounds department, operation of plants would be numbered 2,1,1. To delineate the objectives within this specific area, each objective is assigned an additional number. Therefore, the first objective in this area would be numbered 2.1.1.1; the seond, 2.1.1.2; etc. Indicators were numbered in a like manner.

The numbering system allows costs to be categorized against the specified objectives. The cost of accomplishment of the specified objectives can therefore be determined.

This numbering system can be expanded ad infinitum. It is also compatible to data processing or computer application.

Figure 3

Organizational Chart for Hypothetical School District
Outlining Levels One and Two

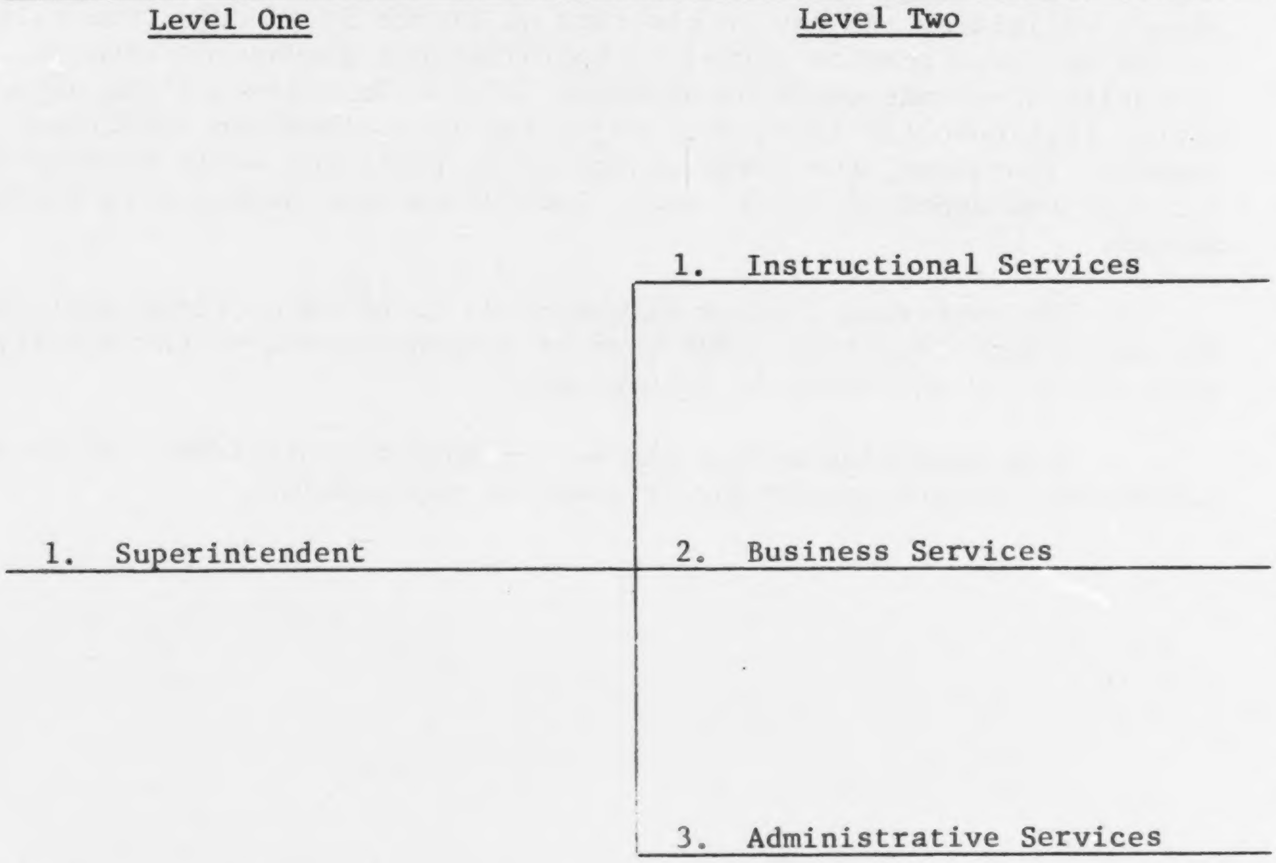
Level One
Level Two
1. Instructional Services
1. Superintendent
2. Business Services
3. Administrative Services

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Figure 4

Organizational Chart for Hypothetical School District
Outlining Levels Two and Three

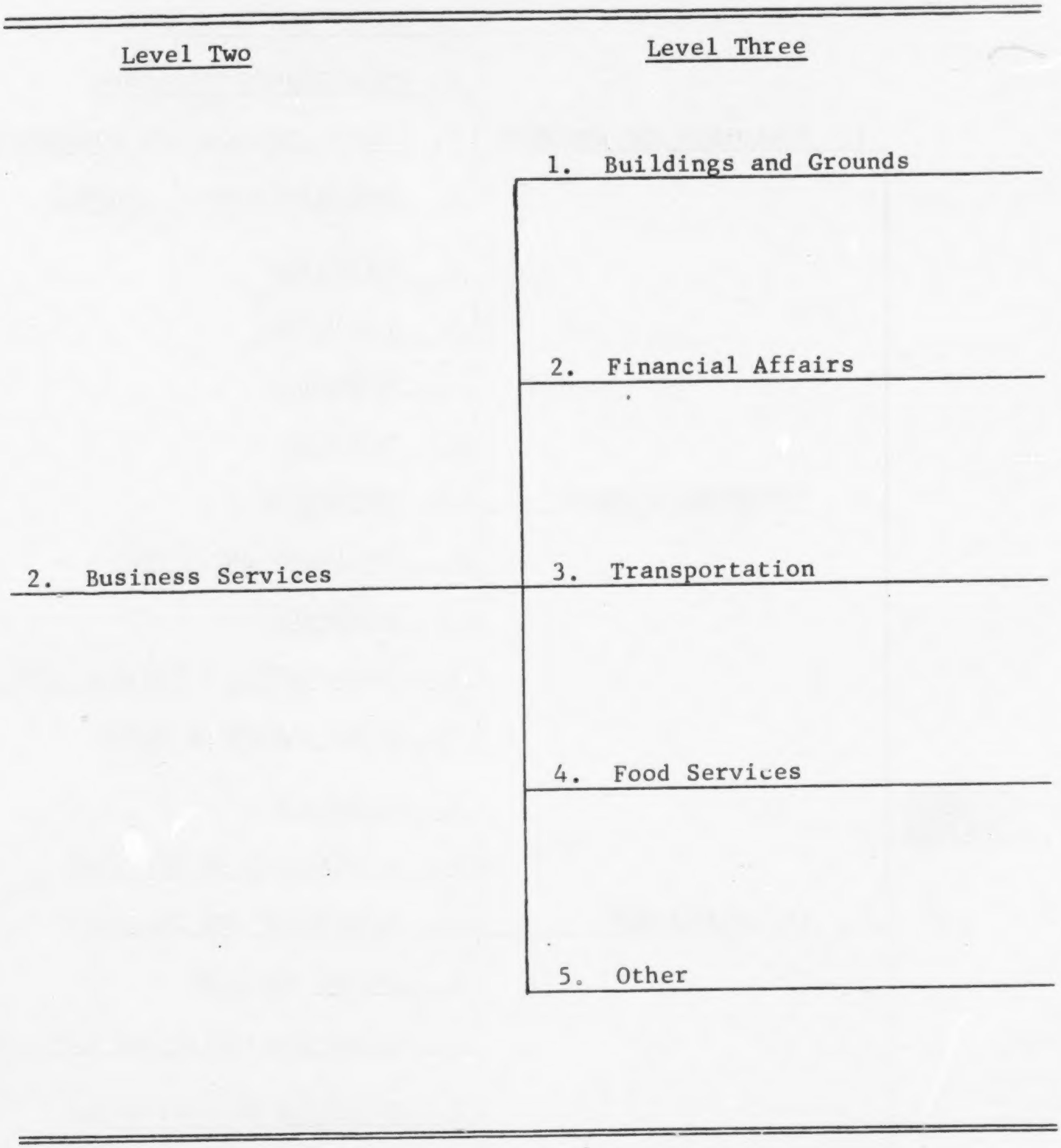
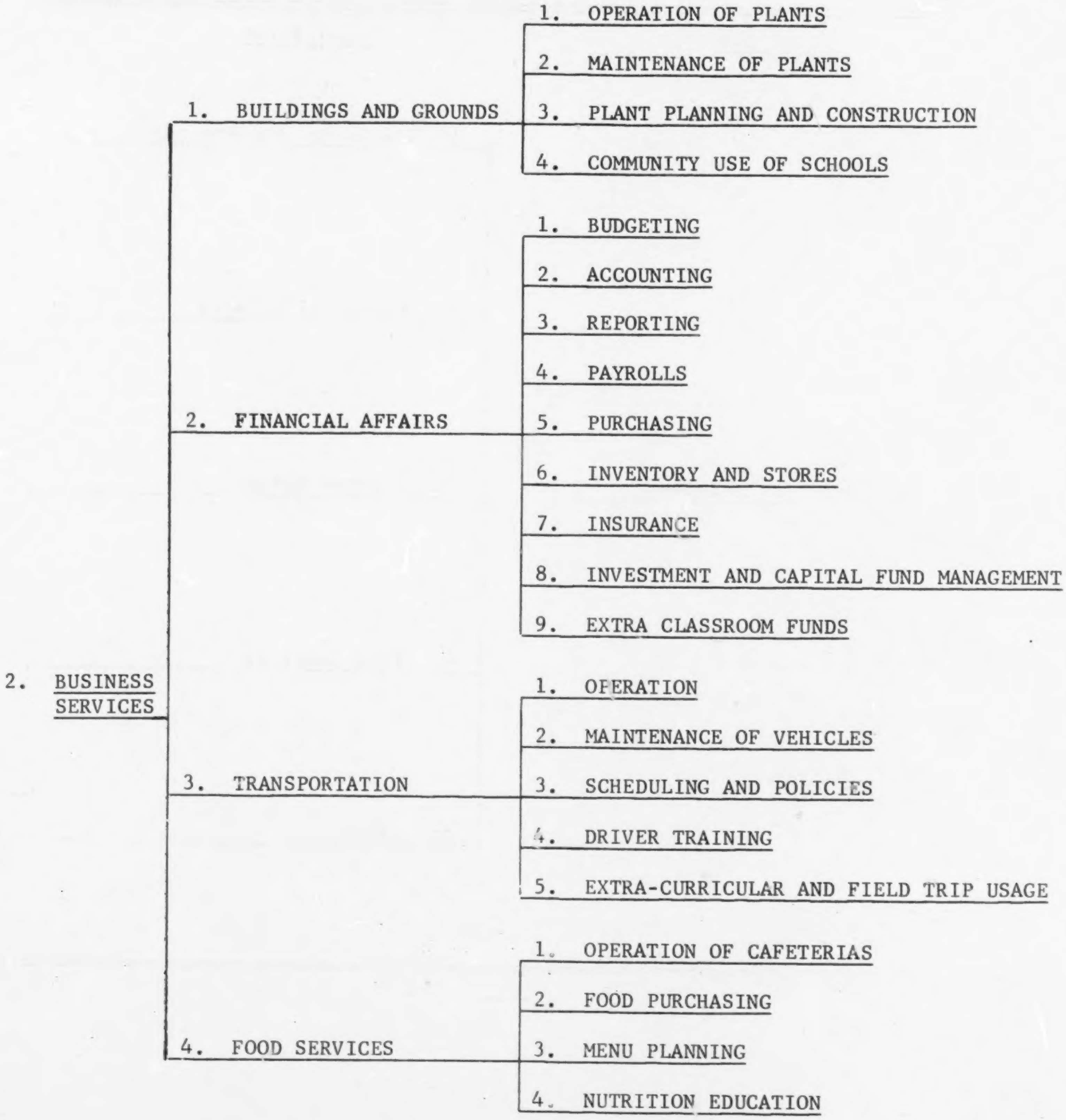

Level Two
Level Three
1. Buildings and Grounds
2. Financial Affairs
2. Business Services
3. Transportation
4. Food Services
5. Other

Figure 5

Organizational Chart Detailing Level Four Activities


2. BUSINESS SERVICES
1. BUILDINGS AND GROUNDS
1. OPERATION OF PLANTS
2. MAINTENANCE OF PLANTS
3. PLANT PLANNING AND CONSTRUCTION
4. COMMUNITY USE OF SCHOOLS
2. FINANCIAL AFFAIRS
1. BUDGETING
2. ACCOUNTING
3. REPORTING
4. PAYROLLS
5. PURCHASING
6. INVENTORY AND STORES
7. INSURANCE
8. INVESTMENT AND CAPITAL FUND MANAGEMENT
9. EXTRA CLASSROOM FUNDS
3. TRANSPORTATION
1. OPERATION
2. MAINTENANCE OF VEHICLES
3. SCHEDULING AND POLICIES
4. DRIVER TRAINING
5. EXTRA-CURRICULAR AND FIELD TRIP USAGE
4. FOOD SERVICES
1. OPERATION OF CAFETERIAS
2. FOOD PURCHASING
3. MENU PLANNING
4. NUTRITION EDUCATION

APPENDIX D

STANDARD ERROR OF PROPORTION

The validation method utilized in this study is the standard error or proportion of a dichotomy expanded to the .05 confidence level. The formula for determining the standard error of a proportion is as follows:

$$\sqrt{\frac{p\ q}{N}}$$

Since the option offered to the jurors was essentially a dichotomy, the hypothetical distribution was 50-50. Therefore, p and q were assigned the value of .5.

The researcher desired to subject the juror ratings to the .05 confidence level; and since the researcher was only interested in determining the positive validation area of the curve, the 1.64 coefficient was used. Therefore the full formula was as follows:

$$p + 1.64\sqrt{\frac{p\ q}{N}} \quad \text{where } p \text{ and } q = .5.$$